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Education for Sustainability: A Sensory Ethnography in Biodynamic Agriculture

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Abstract

Since the inception of compulsory education in the Western world, learning in school has privileged our senses of sight, hearing and touch. The senses of smell and taste have been undeveloped or even neglected in formal education based on the assumption that they are not senses of knowledge (Classen, 1999). In the twenty-first century, environmentally injurious phenomena related to climate change and biodiversity loss have profound impacts on our total environments and our whole bodies—especially beyond what is perceptible by vision, hearing, video and text. This thesis uses sensory ethnographic material collected in a biodynamic farm in northern Italy and in the international Slow Food movement to explore how the senses are engaged in generating and redefining values concerning sustainability and sustainable practice. The sensory ethnographic material is buttressed by a history of the senses in Western thought and culture and explores why dominant ways of understanding the senses in the West are out of step with how humans actually learn. Through this discussion it is argued that theoretically, methodologically and practically dissolving Cartesian ontology is a precondition for sustainability of any kind. This sets up the sensory ethnographic material where I draw from cultural and phenomenological theories of the senses, perception and a theory of place to situate the biodynamic farm and Slow Food movement as place-events of sustainable practice, activism, and education. I then explore how sustainable values are learned through one's multisensory emplacement within such contexts. The thesis is meant to contribute to discussions about how humans learn in the world and provide an opening from which to explore the possibilities of holistically and explicitly educating the senses in non/formal education. Such considerations are aimed at better preparing learners to actively perceive their world beyond the means of pen, paper, video, debate and discussion. The value of this thesis lies in its interdisciplinarity and the possibilities it raises for reappraising the education of the human sensorium in the Anthropocene.

Key words: Anthropocene, biodynamic agriculture, education and learning, sensory ethnography, Slow Food, sustainability, the senses

1 FOREGROUND

> *Now knowledge is conveyed through the senses; they are our Masters […] Knowledge begins by them, and can be reduced to them. After all, we would have no more knowledge than a stone if we did not know that there exist sound, smell, light, taste, measure, weight, softness, hardness, roughness, colour, sheen, breadth, depth […] Anyone who can force me to contradict the evidence of the senses has got me by the throat; he cannot make me retreat any further. The senses are the beginning and the end of human knowledge.* — Michel de Montaigne, A*n Apology for Raymond Sebond*

The fieldwork for this thesis was conducted on a biodynamic farm in an Ecovillage in Piedmont, Italy and at international Slow Food conferences in Copenhagen, Denmark and Torino, Italy. Utilising the sensory ethnography methodology proposed by Sarah Pink (2015), I have drawn from burgeoning academic work on the cultural significance of the senses and phenomenology in geography, philosophy, history, education and especially anthropology, among others. Emerging theoretical and methodological constructs regarding the senses and multisensory phenomenological understandings of learning and knowing are used to assert that dissolving Cartesian ontologies in theory *and* practice are a prerequisite for any notion of sustainability. This is accomplished by a sensory ethnographic exploration of emplaced, multisensory learning experiences in a biodynamic farm in an Ecovillage, and the Slow Food movement—contexts where environmentally sustainable practices are explicitly pursued. From the historical and ethnographic material presented, I suggest that practices of sustainability become valuable through the engagement of one's whole sensorium and engender understandings of the inextricability of being-in-the-world[1]. Sensory ethnography, as proposed by Sarah Pink (2015), 'has certain congruences with the ethics of those who hope to make the world a better place, seeing greater sensorial awareness as a route to achieving this' (p. 69). As such, I present this thesis work as an 'ethnographic place' in which I attempt to engage the reader sensorially through the use of evocative description, images and videos in ways that I hope are ultimately productive of a more sustainable world. I begin by attempting to bring the reader into an awareness of the senses in social life, education and sustainability.

1.1 Introducing: The senses

[1] The term being-in-the-world is used throughout this thesis to refer doubly to the notion of humans as organisms who cannot be otherwise than in-the-world (Ingold, 2000, p. 47).

This thesis aims to inject scholarship emerging from the interdisciplinary field[2] of 'sensory studies' (Howes, 2013) into education and learning, thereby troubling hegemonic models of education in which 'learning about the world primarily through our senses of sight and hearing' (Classen, 1999, p. 270) is the modus operandi. The 'sensorial revolution' (Howes, 2006, p. 115; see also Porcello, Meintjes, Ochoa, & Samuels, 2010) has set about the task of de-privileging sight and repositioning the multisensory, emplaced body in mutually constitutive correspondence with its total environment to produce new understandings of lived experience, learning and education, knowing and research (e.g. Classen, 1993, 1997, 1998, 2019a; Classen, Howes & Synnott, 1994; Geurts, 2002; Harris, 2007; Howes, 1991, 2003, 2005a, 2018; Howes and Classen, 2014; Ingold, 2000, 2011a, 2018a; Jackson, 1989; Pink, 2004, 2012, 2015; Rodaway, 1994; Seremetakis, 1996; Stoller, 1989, 1997; Sutton, 2001, 2010).

I begin by addressing relevant concepts and terminology, beginning with the term 'sensorium'. This is defined by Howes (2009) as:

> [sensorium] can stand for 'the five senses', which is one way of construing the totality of percipience, but nothing prevents it from being extended to other constructions, other models, such as 'the two senses' or 'the seven senses', and so forth. (p. 2)

This definition indicates the cultural constructedness of sensory categories in which some societies recognise five senses (the colloquial modern West), while others might recognise five senses *differently* (e.g. talking rather than taste), or perhaps construe them as having two or six or more. Other terms relating to the senses, such as 'sensual', 'sensuous', 'sensoriality' and other similar derivatives will be used throughout this thesis. These terms refer not to their normative sexual or erotic insinuations, but rather to their more neutral or literal ones dealing directly with the sense experience. Indeed, the usage of these terms in this thesis intends to go beyond even contemporary dictionary definitions. The Oxford dictionary, for example, provides two definitions of the word 'sensuous', one of which states 'relating to or affecting the senses rather than the intellect' ("Sensuous," n.d.). This definition in fact betrays a Cartesian separation of body (senses) and mind (intellect) that is antithetical to the theoretical and methodological foundations of this thesis. Therefore, following Tim Ingold, I consider the term 'sensuous' and its derivatives as both constituting and constitutive *with* the intellect and, moreover, extending into and as part of—indeed, *within*—the environment, rather than consid-

[2] In referring to an academic 'field' I imply an element of interdisciplinarity, whereas in the term 'discipline' I imply an element of rigidity and/or insulation.

ering the environment as something that is 'out there' (Ingold, 2000, p. 4). Furthermore, this thesis regards sense experience as relational—that is, never in isolation as a separate mode of being, nor simply personal or psychological, but rather social, intersubjective and shaped by cultural and practical engagement in the world. Howes (2003) puts it succinctly:

> Sensation is not just a matter of physiological response and personal experience. It is the most fundamental domain of cultural expression, the medium through which all the values and practices of society are enacted. To a greater or lesser extent, every domain of sensory experience, from the sight of a work of art to the scent of perfume to the savour of dinner, is a field of cultural elaboration. Every domain of sensory experience is also an arena for structuring social roles and interactions. We learn social divisions, distinctions of gender, class and race, through our senses. (p. xi)

This passage conveys an orientation to the senses that that goes well beyond contemporary treatments of their significance and centres them as fundamental to any notion of culture. Indeed, this thesis will attempt to develop a future-oriented analysis (more on this later) that both acknowledges cultural representations of sense experiences (e.g. Howes & Classen, 1991; 2014) but adheres to phenomenological understandings of being-in-the-world, following especially, Ingold (2000, 2011a, 2018a) and Pink (2011, 2013, 2015). The implications of such an approach for education—and a future in which sustainable practices must become embedded as key constituents of culture and leading life—are significant.

1.1.1 Sustainability

In the age of environmental crises, the concept of sustainability—a rising star in popular and academic discourses around education—is central to this thesis. In proximity with various treatments of the concept, but specifically with the Global Ecovillage Network (GEN), I conceive of four dimensions of sustainability: environmental, social, cultural and economic. However, I take environmental (or, ecological) sustainability as the foundation from which all other dimensions of sustainability are ultimately based upon. This is because cultural, social and economic activity all rest on the assumption that the natural environment can provide energy (e.g. food, water, heat, air, etc.). Therefore, I define sustainability simply as that which 'enables us to carry on, to keep life going, and to offer new beginnings for generations to come (Ingold, 2018a, p. 37), but orient this definition toward its environmental and/or ecological components[3]. In order for the conditions of sustainability to be met,

[3] This definition of sustainability is also commensurate with John Dewey's definition of education as the 'social continuity of life' (as cited in Ingold, 2018a, p.3).

sustainable custodianship of the soil (as well as the sea, but that is beyond the scope of this project) must be the point of departure. As my site of inquiry I have chosen an Ecovillage-supported biodynamic farm which is closely, if indirectly, linked to the international Slow Food movement. Biodynamic agriculture, Slow Food and GEN are all dedicated to sustainability in various elaborations but it is Slow Food and the biodynamic farm that are particularly attuned toward the ground on which our world is built. Therefore, while I acknowledge all the forms that sustainability can take, I am most interested here in the everyday, emplaced and multisensory experience of sustainability as it unfolds in biodynamic agricultural practice—understanding agriculture as the 'bottom condition of civilisation' (King, 2004/1911, preface, p. 5)

1.1.2 The senses in education, learning, and the school, for sustainability

In order to think about the senses and sustainability in education and learning[4], it is necessary to briefly examine the origins of compulsory schooling in the West. There were two periods in which its growth accelerated: firstly, after the Reformation in the sixteenth century, and later, in the eighteenth and nineteenth centuries when it became bound up in the project of nation building, ensconced in an age of mechanisation (Foucault, 1995; Petersen & Millei, 2016; Roberts, 2019). It comes as no surprise then, that the Enlightenment ethos of mechanisation had found its way into compulsory schooling (Foucault, 1995, pp. 165-169; Howes & Classen, 2014, p. 73). And just as mechanisation and quantification were linked with a narrowing or disconnection of multisensory ways of knowing the world, so was the school (Classen, 1999; Roberts, 2005). Mechanised compulsory schooling, it may be argued, effectively constricted the sensory possibilities of its cohorts by creating a situation that favoured sitting in silence, listening, writing and reading (Howes & Classen, 2014, p. 71). Foucault (1995) describes the education—rather, the training—that took place in one school: 'few words, no explanation, a total silence interrupted only by signals—bells, clapping of hands, gestures, a mere glance from the teacher' (p. 166). While such a particular classroom situation may not be typical *en masse* in Western education today, it does feel eerily close to instances of standardised test taking—another domain with which Foucault has taken issue in regard to self-disciplining and individual-making capacities (pp. 186-192). What, then, are we to make of the origins of compulsory education from the perspective of the senses?

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[4] For the time being I do not care to make any strong distinctions between the terms 'education' and 'learning'. Until it is necessary to treat them, as it will be in Chapters 2 and 3, I will use these terms interchangeably, or else together, taking them to be tightly implicated in the same processes.

Such origins, marked by drills or routines and structured via sounds and gestures, mechanical and militarised, renders an idea of a pupil that fits well within the stimulus-response models of learning associated with behavioural (read: educational) psychology. Was the behaviourist school of psychology and learning rooted in, or at least an outcome of, the circumstances of such classrooms[5]? It is helpful that Foucault (1995) makes precisely this argument in the affirmative (p. 224). Taking the origins of school as such, it is indeed very interesting that the behaviourist school of psychology maintained (even *maintains)* such a formidable, if taken for granted, influence on school subject planning and teaching, for example, in mathematics instruction or the familiar 'drill-and-practice workbooks' (Greeno, Collins & Resnick, 1996, pp. 33-4).

The influential behaviourist approach has had little to say, however, regarding what is 'worth knowing,' as its lens has been fixated on how subject-matter information 'could be most efficiently acquired by students' (Greeno et al., 1996, p. 33). This begs the question of whether such approaches and techniques to learning—still present in contemporary schools—are more akin to forms of control rather than to forms of education. If they are in fact closer to control, then much of contemporary schooling—still consisting of sensorially similar features of sitting, watching and listening—is doing its job. If contemporary schooling wishes to be more about *education* (in a Deweyan, or perhaps Ingoldian sense) then it is high time for fundamental change. One may ask: could research focused on the 'sensescapes' that compose schools be one possible guide to pursing a form of education that 'grows' (e.g., Ingold, 2000, pp. 77-88) pupils in order for 'leading life' (Ingold, 2018a, p. viii)? What would schools be like if their sensescapes were not characterised primarily by sitting, watching and listening, but instead by intellectually engaging with movement, looking, listening, eating, smelling, sounding, touching, and more? Indeed, amidst a global environmental crises, something about formal education feels amiss when we consider that environmentally injurious structures and processes have profound impacts on our total environments and our whole bodies—especially beyond what is perceptible by sight, language and text, not to mention the new types of knowledge that might be *generated* from more intentional engagement of all the senses. What is the responsibility, then, of education to educate our sensorium in ways that help us to act and react intelligently toward destructive, or even pleasurable, aspects of the world that cannot be fully grasped by means of pen, paper, video, debate or discussion? These questions—though rhetorical—represent driving forces in the background of the present project.

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[5] Or indeed, barracks, prisons or laboratories filled with salivating dogs?

In recent education and learning research, calls for a 'greater emphasis on senses and place' are only just being answered (Fors et al., 2013, p. 171). One outstanding example is found in a special issue in the *Journal of Curriculum Theorising,* guest edited by Walter Gershon (2011), that gives a platform to scholars who 'examine the varieties of curriculum (e.g., hidden, formal, informal, enacted, delivered, null) through the senses' (p. 1). Other notable examples include approaches to the senses in the non-formal learning of skateboarding (Bäckström, 2014), the failure of health policies in school (Evans, Davies, Rich & Depian, 2012), museum exhibits (Fors, 2013), sensory pedagogy in early childhood education, (Johansson & Løkken, 2014), food and intercultural exchange in higher education (Stowe & Johnston, 2012), and soundscapes, silence and bodily learning (Ceraso, 2014; Gallagher, Prior, Needham & Holmes, 2017; Gershon, 2018). There is a conspicuous absence, however, of sensory approaches to environmental and sustainability education (ESE), education for sustainable development (ESD), environmental education (EE), or other sustainability-focused education programs. Meanwhile, criticism of such programs as they have existed to the present, in EE for example, can be intense (e.g. Blumstein & Saylan, 2007; Elrich, 2011).

While notions of place and place-based education in ESE/ESD/EE are well-established and critically important (e.g. Gruenewald, 2003; Tuck, McKenzie, & McCoy, 2014), sensorial emphasis remains in absentia. For example, a recent edited volume *Envisioning Futures for Environmental and Sustainability Education* (Corcoran, Weakland, & Wals, 2017) evinces no writing that explicitly examines or elevates sensoriality, though the title itself alludes to the hegemonic Western privileging of vision. Inside, one tends to find abstracted, disembodied language indicative of the mind/body duality it is often simultaneously trying to overcome (Stoller, 1997, pp. xv-xvii). A literature review of ESE in early childhood education (Hedefalk, Almqvist, & Östman, 2015)—also absent of sensoriality—however, does call 'for more research into the learning process'—the 'how' and 'what' of education concerned with sustainability (p. 12). This challenge befits a sensuous approach to research and educational practice and it cries out for interdisciplinary treatments of knowing and learning. All things considered, a remodelling of education and learning research and curricula that explicitly account for and engage the whole sensorium in the movement toward sustainability is a worthy endeavour. As a final note, I will not attempt to neatly define ESE, ESD or EE because I do not care to split hairs regarding their usage, but am rather concerned more generally with any learning or education that takes sustainability as a central or even peripheral focus. I will now lay out the research tasks for this thesis.

1.2 Research tasks

My intention in this thesis is not to unveil a grand new finding in a conclusion or final discussion, but rather to engage with and discuss a set of research tasks as the narrative unfolds—recognising that knowledge is not something that is attained at a point of final destination, but is rather accumulated along pathways of movement (Ingold, 2018b). So, rather than ask questions that elicit answers I am electing to outline a set of tasks which will be addressed throughout, and even embodied within, this thesis.

First, it is my intention to practically, theoretically and methodologically dissolve the Cartesian dualities that have formed the bedrock of Western thought and science since Greece and were solidified in the Enlightenment when René Descartes subsumed the mantle. Though much scholarly work has specifically targeted Cartesianism, such work has itself been criticised for simultaneously operating from within the Cartesian frameworks it is trying to deconstruct (e.g. Ingold, 2000; Stoller, 1997)[6]. Cartesianism 'takes as its starting point the self-contained subject confronting a domain of isolable objects' which sets up an easy rationale for separating humans from the natural world in which we are, in fact, inextricable (Ingold, 2000, p.168). Dissolving the Cartesian ontology on which Western academic disciplines are based (Ingold, 2000, p. 173), I argue, is a precondition for pursing sustainability in any form because sustainability requires, at the very least, the understanding that humans are inextricable from the natural systems in which we find ourselves. This is accomplished through critical historical and theoretical discussions and through the field work material I have produced. Most importantly I dissolve Cartesian ontology through the very presentation of this thesis itself. The possibility to do this arises from infusing sensory and phenomenological theory and methodology into scholarly knowledge production and communication—an attempt to retreat from the abstract and come back to a world of sense.

Second, through an interdisciplinary approach I aim to infuse recent scholarship in sensory studies into educational research and practice. To do this requires contextualising the historical and cultural history of the senses in Western society and thought. I focus on Western history because it is the formation of sensory beliefs in the West that has exerted the largest (hegemonic and colonial) influence on formal education globally. By contextualising and merging sensory studies to education, I put myself in position to address the third and final research task.

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[6] Stoller calls out Michele Foucault and Judith Butler for betraying this in their very prose (see below); Ingold (2000) targets the ontological assumptions of many who claim (and even those who do not) to be dethroning Cartesianism, including ecological psychologist James Gibson, as well as whole of mainstream psychology, biology and anthropology (pp. 157-171).

In the final research task I draw from cultural and phenomenological theories of the senses as well as a theory of place to situate the biodynamic farm and Slow Food movement as sites of sustainable practice, activism, and education. I then explore how sustainable values are learned through one's multisensory emplacement in these contexts and consider the implications for formal education.

To begin, it is important to situate the interdisciplinary work that informs this project, as well as to address the importance of researcher reflexivity that is required for this thesis. Discussing this here in the Foreground allows me to contextualise and set up the theoretical positions, writing techniques and self-referentiality used throughout thesis.

1.3 An interdisciplinary orientation

This project was conceived under the auspices of the international Master of Arts programme in Education and Globalisation at the University in Oulu. The program's location within the university's Faculty of Education indicates its commitment, clearly, to advancement of education research. However, the connotations of the word globalisation its the inherent interconnectedness to contemporary social sciences, further indicate that the program need not be confined to any one discipline. With these considerations in mind I accepted the offer to attend this program, ultimately embarking on what is a decisively interdisciplinary thesis project. The desire to bring an interdisciplinary approach stems from my background studying anthropology and psychology for my Bachelors degree at the University of Arizona in the United States. These experiences led me to an understanding of anthropology as an inherently interdisciplinary field—one that can flexibly move within, without and between nearly any established discipline or field because of the fundamental questions it asks about what it means to be human. Indeed, core anthropological questions strike deep parallels with education and learning, for example: how do people come to know and learn? Such a question suggests there is fruit in imbuing anthropological theorising with the ways that education and learning are conceptualised, organised, enacted and practiced. I shall therefore open here with a discussion on how this thesis has taken interdisciplinary shape by showing the deeper historical connections between anthropology and education.

My life-wide experiences with food, education, living outside of my home country for many years, and my academic experiences in the Education and Globalisation programme have coalesced into

the project undertaken here. First, I want to acknowledge that the theoretical and methodological constructs of this thesis, as well as the subjects of this study itself, my not be readily discernible for those unfamiliar with the anthropological literature. However, my intentions in developing this project are very much concerned with demonstrating the compatibility inherent between the theories and methods in anthropology from which I have drawn, and the areas of education and learning in which I seek to apply them. Learning and education fields of research—despite the Cartesian construction of distinct disciplines—clearly have relevance in a vast range of disciplines. However, when put the other way round, it is the discipline of psychology that has been education and learning's most familiar bedfellow, from the behaviourist schools up to the 'cognitive revolution' of the 1950s and 60s (Anderson, Reder, & Simon, 1996, p. 5; Greeno et al., 1996). This is made plain in the ubiquitous practice of joining the words 'education' and 'psychology' under the same department or faculty headings at universities the world over (e.g. at University of Cambridge, University of Jyväskylä, etc.). The prevalence of this practice reflects the deep-rooted connections between education and theological or nation-building projects, and the educational and behavioural origins of psychology, as I discussed earlier. While the behavioural school has long been committed to advancing knowledge of how humans are induced to behave in particular ways when introduced to particular stimuli, cognitive psychology—born more recently and ostensibly committed to a more noble idea of education—actually does a better job at showing how European and European-North Americans of relatively privileged backgrounds learn and behave, rather than humans per se (Arnett, 2008). It is from this educational-psychological disciplinary intersection that this thesis departs, instead, taking approaches issuing largely from the field of anthropology—a field which has long sought to trouble the fundamental assumptions of essentialist and universalising theories of humans.

Anthropology, as the multi-faceted inquiry into the ways of being human, has a long and fruitful but deeply controversial and contested legacy. Its colonial, biological deterministic (i.e. racist) and objectivising history as a field is distilled in projects like the Cambridge expedition to the Torres Strait of 1898, in which the measurement of the sensory abilities of the indigenous communities had the goal of affirming their racial inferiority to Europeans (Howes, 2003, p. 4-6). This goal was 'accomplished' by showing that the sensory capacities of the so-called 'lower senses' (touch, taste, smell) were more developed than European's. Meanwhile, the indigenous sense of sight—constructed by Western empirical sciences as the most rational, objective and intellectual of the senses—was not as well developed as European's, and therefore in line with contemporary racial hierarchies embodied by 'the classic European concept of the opposition of body and mind, savagery and

civilisation' (Howes, 2003, p. 4-6). Nonetheless, the racial assumptions of anthropology's beginnings were adamantly contested by early twentieth century contemporaries in the United States, led by anthropologist Franz Boas and his students at Columbia University, including Margaret Mead, Gregory Bateson and Ruth Benedict, among others. This group of anthropologists were instrumental in the development of a concept of culture removed from the racist biological trappings of nineteenth century evolutionary theory. At this time, early links between education and anthropology were formed. One was through Maria Montessori in Rome, whose official academic position was professor of anthropology (Gustafsson, 2018, p. 1440), and the other through the partnership of Franz Boas and John Dewey. While Montessori's program represented a departure from contemporary educational practices, Boas and Dewey engaged in a good deal of intellectual reciprocity as colleagues at Columbia University, even going so far as to organise a seminar together (Torres Colón & Hobbs, 2015, p. 140-141). It may be said then, that anthropology and education have a long history together, one that is situated in a transformative time for both educational and anthropological history between individuals whose philosophical ideals are still very much relevant. By bringing anthropological theory into education for this project I am seeking to contribute to developing closer connections between the two fields through more recent developments in anthropological theory.

From Boas, anthropology has often remained on the forefront of moves in the social sciences away from positivism and toward interpretation (e.g. Geertz, 1973), reflexivity (e.g. Clifford & Marcus, 1986), ethical representation (e.g. Marcus & Fischer, 1986), and various types of ethnography, including visual (e.g. Mead & Bateson, 1942), multi-sited (e.g. Marcus, 1995), and now sensory ethnography (Pink, 2015). Anthropology's interdisciplinary nature means it has generously and eagerly borrowed from philosophy, geography, history and sociology. This borrowing, I believe, has contributed to its being able to maintain a vanguard position in ethical and methodological issues and 'turns' in the social sciences. For all the influence anthropology has taken and given throughout the social sciences, however, there seems to be a lag in the spread of anthropological theorising into education studies—possibly due to psychology's dominance in this area, as noted above[7]. For instance, the development of multi-sited ethnography (e.g. Marcus, 1995) was partially a consequence of spatial theorising in anthropology (e.g. Appadurai, 1986; Gupta & Ferguson, 1992) that itself was a consequence of doing ethnographic fieldwork in a radically changing postmodern world (e.g. Tyler, 1986). However, multi-sited ethnography and spatial theorising in education and learning re-

[7] A notable exception is the work of Jean Lave (an anthropologist) and Etienne Wenger whose theories of situated learning have significantly altered the education and learning landscape.

search have only been seriously advocated within the last two decades, for example in place-based education (e.g., Gruenewald, 2003), comparative education (e.g., Larsen & Beech, 2014), or education studies more generally (e.g., Pierides, 2010). This thesis project, therefore, initially emerges from recent developments in anthropological theory and methods pertaining to new understandings of the senses in culture, phenomenology and ethnography before building a case for their suitability in learning and education research and practice, especially in regard to sustainability education.

1.4 Setting up: Turns, knowledge production, representation and reflexivity

Critical 'turns' in anthropological theorising typically manifest themselves first in ethnographic practice within the field of anthropology. The obvious reason being that ethnography has long been the *modus operandi* of anthropological research. This means that other fields of study (e.g education) tend to be slower to adopt and/or adapt to changes in ethnographic methods—which often come with theoretical 'turns' attached, further complicating matters of adoption and adaptation. This is certainly the situation for sensory ethnography as it relates to the 'sensual turn' in the 80's and 90's, and 'away from linguistic and textual paradigms' of the 60's and 70's[8] (Howes, 2003, p. 29; Pink, 2015). Reflexivity in sensory ethnographic research, then, requires a brief history of reflexivity's origins which, interestingly, are also bound up with the origins of sensory studies.

The reflexive turn in anthropology in the 1980's (e.g. Clifford & Marcus, 1986; Marcus & Fischer, 1986) was one of several such turns in the social sciences generally (e.g. linguistic, feminist, visual, etc.) that have variably affected the disciplines engaged in ethnographic practice. Reflexivity in anthropology—now almost unanimously considered an essential part of ethnographic research—can be traced to Edward Said's influential polemic *Orientalism* (1978) on Western writers writing about non-Western peoples (Marcus & Fischer, 1986, p. 1). Partly in response to this (as well as other postmodern challenges), the edited volume *Writing Culture* (Clifford & Marcus, 1986), written by a small group of anthropologists, argued that the ethical production of knowledge and representation of research subjects must be addressed, and might be accomplished through dialectical constructions (of discourse, through writing) that critically and reflexively consider ethnographic encounters (Pink, 2015, p. 11). While this work has had an important impact on the reflexive trajectories of many human sciences since, to the tastes of sensorial anthropology it was not yet fully ripe. The 'writing culture' debates and reflxivity challenged the culture-as-text interpretive approach sketched

[8] Linguistic and textual biases also abound in education studies (e.g., Gershon, 2011).

by Clifford Geertz (1973), but Howes (1991a) has critiqued its 'verbo-centric' (p. 7) dialogical strategy. The dialogical move, Howes argues, in its attempt to address the 'crisis of representation' (Marcus & Fischer, 1986, p. 7), in fact sidelines the ethnographic subject in favour of the author because it lacks a full consideration of the cultural importance of the senses (Howes, 2003, p. 25). Howes (1991a) continues, '…the shift from the ocular to the oral must be accompanied by a further shift, which takes in the gustatory, olfactory, and tactile modalities as well' (pp. 7-8). This critique from Howes, situated amongst contemporaneous anthropological interest in phenomenology and embodiment (e.g., Csordas, 1990; Jackson, 1983, 1989) represents a major landmark documenting the 'sensual turn' in the social sciences, with reflexivity enlisted as a significant feature of this move.

In the wake of the writing culture debates, attention to the ethical production and composition of ethnographic knowledge *and* cultural exploration of bodily and sensory ways of being was taken on by Paul Stoller in his book *A Taste of Ethnographic Things* (1989), followed less than a decade later by *Sensuous Scholarship* (1997). In the latter work, Stoller admonishes ethnographers for the lack of serious attention to the calls echoed by the authors in the writing culture debate (p. 31), while simultaneously arguing that a 'fusion of the intelligible and sensible' is essential for ethnographic representations or other work concerned with the body, particularly in non-Western societies where text is designated no place (p. xv). Indeed, following Michael Jackson (1989), Stoller proposes sensuous scholarship as a way of overcoming the disembodied academic writing that is symptomatic of Cartesian duality. Critiquing the disembodied writings of Michel Foucault and Judith Butler, both of whom are writing of the body, Stoller argues:

> The style of Butler's prose continuously evokes the texture of Foucault's language, which often employs sharply conceived spatial metaphors woven into a dense mosaic of abstract analysis. The persistence of such language in both feminist and post-structuralist writings on the body is ironic. In an abstract way the models and metaphors constructed by the likes of Foucault and Butler powerfully deconstruct the Cartesian edifice. But concomitantly their bloodless language reinforces the very principle they critique—the separation of mind and body, which…regulates and subjugates the very bodies they would liberate. (p. xv)

For Stoller, then, sensuous scholarship requires reflexive attention to the body, allowing for 'a fuller sensual awareness of the smells, tastes, sounds and textures of life among others' (p. 23). While this call to reflexivity was directed particularly at Western researchers studying in non-Western contexts, the sensory turn in scholarship has clearly shown why serious attention to sensory ways of being is

essential in ethical representation in any context precisely because it dissolves Cartesian ontology. Indeed, attention to sensuousness and reflexivity in writing—with the inclusion of photos, video and more—is part of the dynamic framework of sensory ethnography, which has a 'moral responsibility to 'inspire, direct or be part of the processes of intervention and change' (p. 194).

From this discussion we can begin to grasp the inextricable nature of sensuous reflexivity with the ethical representation of research participants, knowledge production, phenomenological-sensual-cultural relations and, crucially, overcoming the Cartesian duality that tends to unethically and un-sustainably structure not only representation in ethnographic research, but the globalised world more generally. In Chapter 3 I will turn fully to my sensory ethnographic material which will require a full-bodied demonstration of the importance of the reflexivity I have addressed here. For now, for now I turn to the theoretical constructs that support this thesis.

2 COMING TO OUR SENSES IN EDUCATION AND SUSTAINABILITY

> *Touch brings the blind many sweet certainties which our more fortunate fellows miss, because their sense of touch is uncultivated. When they look at things, they put their hands in their pockets. No doubt that is one reason why their knowledge is often so vague, inaccurate and useless.* — Helen Keller*, The World I Live In.*

This chapter begins with a history of the senses in Western thought and science, starting from ancient Greece and covering various historical and ethnographic examples of the myriad ways that peoples' culturally constructed understandings of the senses shape our world. This discussion sets the stage for a deeper consideration of contemporary theories concerned with sensation. I will treat two main currents of sensory-related theory: that which is aligned with the cultural/representational, and that which is aligned with the phenomenological (i.e. non-representational or more-than-representational). Reconciling these strands within the sensory ethnographic framework allows for the use of both representational sensory categories and phenomenological understandings of being-in-the-world. This discussion is meant to emphasise the multisensoriality inherent in any experience, but also to show that attention to particular, culturally relevant sense categories profoundly impacts the unfolding of life as we know it.. I then devote space to the Slow Food movement to indicate how their philosophies and approaches to sustainability through food connect with the multisensory education on the biodynamic farm and Ecovillage.

2.1 A History of the Senses

In the introduction to her book *Culture and the Senses: Bodily Ways of Knowing in an African Community,* Kathryn Linn Geurts (2002) sets out by asserting that the Western five-sense sensorium of sight, sound, touch, taste and smell (listed here in its modern hierarchical order) is but one 'folk model' (p. 3) amongst countless other theories of sensation across cultures and throughout history. This Western five-sense folk theory—while seemingly presumed to be scientific fact—was actually codified and hierarchised in ancient Greece with Aristotle and 'refined' by Immanuel Kant during the Enlightenment. Absorbing some bumps and bruises along the way, this model is still very much with us today and is a powerfully hegemonic apparatus for understanding human existence. In Geurt's work with Anlo-Ewe cultural groups in Ghana, she directs our attention to a sensory model that originates from within the body—in this case, balance—that is at odds with the traditional Western

model that ‘privileges mental representations and external modes of knowing’ (2002, p. 7). Indeed, mental representations precipitated by 'external' stimuli lay bare an underlying Cartesian worldview.

Since the 1980s the anthropology of the senses has convincingly proffered the notion that the senses are socially and culturally constructed and differentially elaborated or privileged at different times and places throughout the world. In this next section I will examine the trajectory of the Western five-sense model and show how it has been appropriated and ordered to justify class, racial and gender hierarchies and other forms of control, ending with the rapidly changing ‘sensescapes’ (Howes, 2005a, p. 143) of the modern world under the guidance of capitalism and environmental destruction.

2.1.1. Separation and hierarchy

The known history of the philosophised human senses in Western civilisation begins in ancient Greece. The merits of indulgence in sensory pleasures—indicated by erotic art, music, love of food and drink, interest in beauty, hedonist philosophy—were as prevalent as the skepticism and distrust that peppered the writings of the earliest philosophers (Synnott, 1991, pp. 61-3). Although a diverse chorus of ancient Greek opinions on the senses existed, it was Aristotle whose legacy persists, albeit with some modifications, to be addressed shortly (Figure 1). The Greek legacy begins, significantly, with the separation of sense and reason by Parmenides, followed by Plato’s belief in the primacy of sight (for whom this gift from the gods enabled philosophy itself), ultimately coalescing in the five-sense hierarchisation of the senses by Aristotle.

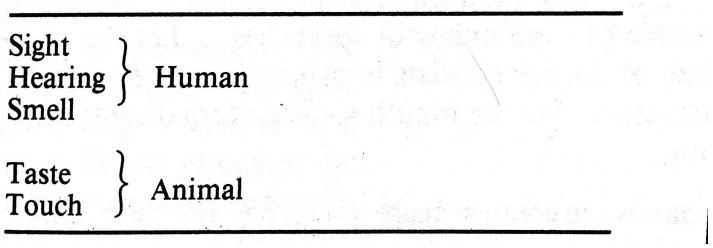

Figure 1. Reproduced from Synnott, 1991, p. 65

Parmenides’ separation of the senses from the reasoning mind has been far-reaching, reaffirmed by Christian morality and Enlightenment philosophers through the ages and presently reflected in the Oxford English Dictionary’s *other* listing for the word 'sensuous', which states ‘attractive or gratifying physically, especially sensually’ (“Sensuous,” n.d.). While the definition I addressed earlier be-

trays a Cartesian split, this definition here is a reflection of Aristotle's ranking of the so-called animal senses of taste and touch. These senses not only did *not* distinguish humans from non-humans, they were regarded as the avenues to promiscuity, gluttony and other excesses. Though to be fair, by Greek standards these excesses were not necessarily bad things as long as moderation was involved. This sensual moderation, however, does not last in the Christian Era.

The Grecian denigration of the 'lower senses' is comparably modest to the amplification that occurred at the advent of Christianity. Immoral acts of gluttony and promiscuity were understood by Saint Paul to be 'not simply the abuse of the senses', but rather it was 'the senses themselves that are at fault' (Synnott, 1991, p. 65). Saint Paul goes on to pit human nature against the Spirit, reifying these concepts as the body and mind:

> I don't do the good I want to do; instead I do the evil that I do not want to do…My inner being delights in the law of God. But I see a different law at work in my body—a law that fights against the law which my mind approves of…Who will rescue me from this body which is taking me to my death? (Romans 7: 19-24, as cited in Synnott, 1991, p. 65)

It was in the 13th century that Saint Thomas Aquinas gave religious authority to the primacy of sight that began with Plato and came down through the writings of Saint Paul, further cementing the primacy of vision in European philosophy and culture. Through the Middle Ages and into the Renaissance the senses were treated variably from place to place and Order to Order, from the mortification of the flesh exhorted by Saint Ignatius Loyola to the auditory appeasement of Gregorian chanting and spirit-making of the Carthusians and Benedictines (Synnott, 1991, pp. 67-69). The asceticism of the Middle Ages was contrasted by the growing idea, in part due to increasing contact with other non/Europeans, that one's position in society (class, gender, occupation, etc.) or origin in the world (West African, East Asian, Indian, etc.) directly corresponded to their predisposed sensory features. For instance, white bodies were associated with 'fine skins and mild odours', whereas 'black bodies were associated with course skins and pungent odours' (Classen, 2019b, p. 3). Likewise, 'the working classes were not only considered to *live* in coarse, smelly environments, they were also often thought to *be* coarse and smelly' (Classen, 2019b, p. 2, original italics). Women, being associated with the lower senses of touch, taste and smell had the unfortunate predicament of being accused of witchcraft. Classen (2005) elaborates:

> Properly, women used the senses to care for their families: cooking, cleaning, sewing and nurturing. Improperly they dedicated their senses to fulfilling the coarse cravings considered innate to women: greed, lust, and a perverse desire for social dominion. Most improperly, women imbued their animal sensuality with supernatural force and became witches. (p. 71)

This explains why many popular images of a witch consist of her at the cooking pot stirring up a potion, flying away on her broom, or administering poison rather than medicine (Classen, 2005). Meanwhile, men's mastery of hearing and vision made them ideal candidates for rational observation, intellectual activity and participating in public discourse outside the home. In the case of a woman, she should cast her eyes downward in the company of others and refrain from speaking, lest she be accused of witchcraft (Classen, 2005). While the Renaissance and Enlightenment periods did give way to more robust and nuanced philosophical treatments of the senses, these were nonetheless situated in sensory stereotypes, creating a legacy in which sensory stereotyping by gender, class and the newly minted category of race, became commonplace.

2.1.2. Enlightened sensory subjugation

Both Michel de Montaigne (quoted in the opening of this thesis) and Thomas Hobbes writing in the 16th and 17th centuries give recognition to the senses as being the first point of human consciousness. However, their musings on the senses are largely outlasted in legacy by René Descartes and later Immanuel Kant, the former affirming the mind/body split and the latter ranking the senses according to their supposed objective/subjective natures—and both of them declaring the sense of vision as the highest, 'most noble' of senses (Kant, 2017/1798, p. 206; Synnott, 1991, p. 70). In the case of Descartes, while certainly not the first to declare the mind and body separate from one another, it is his surname that we use in the modern era to denote this. In regard to Kant, we are left with a new ordering of the senses that, while locating taste and smell as 'pleasure senses' and 'chemical senses' (as opposed to the other, higher order 'mechanical senses'), nonetheless departs somewhat from the Aristotelean approach by trading touch for smell and relegating the latter into the lowest, most useless and subjective of all the senses. Kant (2017/1798) rhetorically asks, to which sense 'do we owe the least and which seems to be the most dispensable?' He promptly answers himself:

> The sense of smell. It does not pay us to cultivate it or to refine it in order to gain enjoyment; this sense can pick up more objects of aversion than of pleasure (especially in crowded places) and, be-

> sides, the pleasure coming from the sense of smell cannot be other than fleeting and transitory. (p. 207)

Perhaps it is because Kant was held captive by an Aristotelean hierarchy that deems certain senses 'lower,' or of 'pleasure,' that he has quite literally *overlooked* the utility, sociality, and indeed, revolutionary importance of the sense of smell (e.g. Classen et al., 1994; Corbin, 1986). Had Kant paid more attention to the social significance of smells in crowded places, perhaps his legacy would have been radically different.

Kant was far from the only 'thinker' of his time to stand firm in denigrating or raising certain senses above others. Indeed, the Enlightenment of the eighteenth century represents a decisive turning point for global history in which 'enlightened' Europeans began to systematically classify and subjugate the natural world, peoples of other ethnic groups (i.e. races) and those of European descent (i.e. classes), using this hierarchical rendering of the senses as legitimate justification for such action. A sensory historian of the eighteenth century, Lissa Roberts (2019), summarises the defining significance of the senses in the Enlightenment:

> …in which the information based on sense perception were used…as a means of discipline. Qualitative description joined quantitative analysis to transform nature into a storehouse of exploitable resources. Not content to project this view onto nature's three kingdoms, enlightened Europeans created socially and geographically distributed hierarchies in which to situate their fellow humans in terms of how they were taken to live through the senses. Slaves and manual workers alike were considered too sensuous to be left to their own devices. Their bodies had to be managed 'for the good of all' and their knowledge was rarely recognised as anything more than information, which needed to be disciplined by the reason on which the 'enlightened' claimed a monopoly. Rather than opening up the world of boundless creativity, the senses and their embodiment were to be constrained through rationalisation and mechanisation, all in the name of productivity. While science and technology were thus celebrated as ushering in an age of unending progress, a very human price would have to be paid. (p. 131)

While European naturalist and philosopher-begotten sensory values (though there was much disagreement among them, to be sure) legitimated the subjugation and exploitation of humans and nature, there are some important contradictions embedded in their actual work. An examination of the research experiences of naturalist-philosophers shows that it was indeed keenly multi-sensory, despite the fact that 'Scientific publications and reputations…valorised vision as the warrant of disci-

plinary achievement' (Roberts, 2019, p. 120). For example, the globe-trotting ships on which government-funded naturalists explored the world were often equipped with greenhouses in which exotic plants and animals were kept alive. The practicality of such endeavours meant that naturalists and their (often invisible) assistants 'struggled to keep their specimens intact and alive, gaining hands-on experience' caring for them in the ever-changing climatic circumstances of a ship at sea (p. 121). Roberts shows us that, for the naturalist, this was 'no simple matter of intellectual understanding' (p. 121), but rather a deeply sensuous engagement with the objects of their study. This point brings the fact of our ongoing multi-sensory engagement with the natural world to the fore, rendering such engagement as crucial to knowing and learning the world. Indeed, I shall return later to this idea in Chapters 3 and 4.

The technological advancements spawned by the various global European empires seemed to affirm (European) man's descent out of nature and above their lesser human and non-human counterparts. Aided by the technology of the chair, a mind at rest could properly think (Ingold, 2018b, p. 221); supported by machine-rendering boots on one's feet, the hands were free to create, for example, the open, straight and paved streets of London, built for the eye, to see and be seen (Ogborn, 1998: pp. 91–104, as cited in Ingold, 2018b, p. 223). These technologies of design and mechanisation, Ingold (2018b) argues, are the very foundations 'for the separation of thought from action and of mind from body' (p. 221) and are pristine examples of the economic and political ethos of the era, defining man's supposed relationship with nature and greatly affecting the way we experience and live in the world even today. The continued nobility of sight was reinforced in the built environment (Classen, 2019b, pp. 6-10; Ingold, 2018b, p. 223), the proliferation of books and paintings (Howes, 1991a), the inventions of the camera and film (Howes & Classen, 2014, p. 1), and of course, in the classroom where children sat at desks, learned to write and listened to the teacher—a circumstance favouring the presumed senses of knowledge (Classen, 1999, p. 270).

Despite these urban architectures and sense-enhancing technologies, Karl Marx railed against the sensory deprivation of the working classes, their alienation due to the sensory deprived nature of factory work (Howes, 2003, p. 206). Intriguingly, Howes points out that Marx and Engels, in their *Communist Manifesto,* unwittingly foretell the '*the future of capitalism,* rather than its demise' (p. 207, original italics), noting that the transition from the sensory deprivation of the proletariat in industrial capitalism has given way to a hyper-sensual consumer capitalism in the twentieth century in which '[t]he invisible hand of the market has been transformed into the knowing hand of the sales-

clerk' (Howes, 2005, p. 287). The exponential growth of technology, industrialisation and urbanisation of the nineteenth and twentieth centuries at once overstimulates while *artificially* disconnecting humans further from nature. Our modern situation then, was built from the ontological solidification of Enlightenment ideas regarding the role and place of human sensation, and has spread—through the very technological and industrial regimes it has helped create—to large swaths of the globe, reshaping human sense experience on a mass scale. It is to these proceedings I shall now turn, with a particular focus on the environmental aspects of sense experience.

2.1.3 The senses in modernity

The history of the senses I have outlined above has mainly focused on the senses in Western philosophy, religion and science by those who have wielded disproportionate amounts of power and influence in culture and society. However, the effects of mechanical and industrial transformations on the human sensorium since the eighteenth century require a somewhat different treatment. The advent of the industrial age is responsible for overwhelming changes in the sensescapes of Western and non-Western peoples alike. A useful place to begin a discussion of changing sensescapes is with a focus on taste. Taste, as we will see later, is a promising focal point because so much of what we taste is bound up in the political, economic, social, cultural and environmental processes of our modern world (Bourdieu, 2017/1984; Hayes-Conroy & Hayes-Conroy, 2008; Mintz, 1986; Petrini, 2001; Seremetakis, 1996; Stoller, 1989; Sutton, 2001, 2010). Considering the complexities involved in taste, however, there has been a severe lack of academic research centred on it—likely due to the Enlightenment belief that it was too subjective to warrant study (Kant, 2017/1978). I will begin this section by focusing on a particularly important taste and its accompanying materiality—sweetness and sugar. Sugar's manifold uses as spice, medicine, preservative and sweetener in its various processed forms has contributed immensely to the development of modern capitalism and is useful for a consideration of the links between capitalism, taste, human and environmental health, and exploitation (Mintz, 1986).

Sydney Mintz's landmark study on the history of sugar, *Sweetness and Power: The Place of Sugar in Modern History* (1986), connects the production and consumption of sugar in the Caribbean by European powers—beginning in the early 16th century—with the development of industrialism itself. Mintz argues that due to the labour-intensive and technological processes involved in growing and processing cane into sugar, sugar plantations were actually the first 'industry' of the industrial

era, predating any industrial factories appearing in Europe thereafter (pp. 46-52)[9]. Sugar cane is thought to have first been domesticated in Papua New Guinea and was first processed (according to written record) by the Achaemenid Persian empire over two millennia ago. The Arab expansion westward into the Mediterranean in the 7th century marks the first significant exposure of sugar to Europe, beginning a period of sugar cane production and sugar processing that remained strong in the Mediterranean until the Portuguese and Spanish began to establish sugar colonies in the West Atlantic (pp. 19-31). The sugar processing industry of the Caribbean, modelled on the slave-based industry of the 14th and 15th century Mediterranean one, drove the slave trade to new extremes in the so-called New World (pp. 29-32). While the Spanish, Portuguese and French were the first to control the Caribbean production it was the British empire who, wresting control of most of the 'sugar islands' from its European rivals, brought sugar production into mass production. Under Britain's watch, sugar played a key role in the demise of mercantilism and the rise of capitalism (pp. 35-46) and rapidly altered the experience of food and drink for royalty and the upper classes (pp. 82-91) before settling in and saturating the lower classes of industrial Britain, with tea as its main companion (pp. 108-33). Mintz attests:

> During the period 1750-1850 every English person, no matter how isolated or how poor, and without regard to age or sex, learned about sugar. Most learned to like it enough to want more than they could afford. After 1850, as the price of sugar dropped sharply, that preference became realised in consumption. A rarity in 1650, a luxury in 1750, sugar had been transformed into a virtual necessity by 1850. Furthermore, it seems certain that the biggest consumers, especially after 1850, came to be the poor, whereas before 1750 they had been the rich. This reversal marks the final transformation of sugar from a preciosity into a daily commodity and into one of the first consumables fulfilling the capitalistic view of the relation between labor productivity and consumption. (p. 148)

While it may certainly be said that humans have evolved a distinct liking for sweetness, Mintz argues that a biological liking for sweetness cannot explain 'the heavy consumption of refined sugar by some people's in the modern world' (pp. 15-16). Indeed, there is 'nothing natural' (p. 8) about dietary preferences, rather, these are surely based on environmental availability and are sensorially, socially and symbolically structured ways of being, with meanings that can change through time and across space and place. This fact is evident in the quote above, indicated by the significant increase in sugar consumption among the working classes of Britain under a newly minted industrial capital-

[9] Indeed, this type of agricultural 'factory' could be seen, perhaps, as the first agricultural instance of humanity's assent over and above nature—representing a primary example the Cartesian split in action and setting the stage for unsustainable environmental and social conditions.

ist structure. The point here is that the advent of capitalism has made it increasingly likely that controllers of the consumable goods trades are well positioned to influence, both intentionally and unintentionally, the taste preferences of consumers who, to may or may not have the ability to accept, reject or seek out alternative tastes and flavours.

The circumstances of sugar's rise provides us with a frame through which we might look at the sensescapes of consumer capitalism in the twentieth century, because it shows that '[t]he bourgeois moral imperatives and scientific rationality that were first applied to the regulation of the sensorium of the city in the nineteenth century gained more and more momentum' in the pursuit of an 'orderly and predictable world' (Edensor, 2019, pp. 33, 53). These moral imperatives became broadly sense-apparent through the emergence of industrially processed foods (Goody, 2013, pp. 72-90), automobiles, skyscrapers, airplanes, sprawling suburban housing, film, photography, sewage containment, national park designations, plastics and other new types of pollution (Howes, 2019, pp. 1-18). While these technological movements are certainly well-known, what is important here is that they represent profoundly new sense experiences, and therefore, profoundly new and different ways of being in the world. Therefore, the contemporary means through which sensescapes are produced and reproduced are often rooted in the onto/epistemological sedimentation of Western Enlightenment thought—persistently yet artificially disconnecting humans from the world *in* which we depend.

This attempted regulation of sensory experience in pursuit of an orderly world is the reason the second half of the twentieth century gave way to counter-culture movements in many Western countries. Of the post-war period in the United States in particular, one American cultural critic condemned the 'fresh-frozen life in some prepackaged suburb…Disneyland vacations, the cut-rate American dream of happiness out of an aerosol can' (Robert Alter, cited in Belasco, 2007, p. 62). Such attitudes epitomised a reaction against the post-war industrial homogenisation of culture which, at the most fundamental level, are reactions to the homogenisation and artificiality of sense experience. The reaction of 1960s and 70s counter-culture in North America could be seen, felt, heard, smelt and tasted as a sensory rebellion: attempts to reconnect with nature (walking barefoot), refusal of standardised dress and social roles (changes in hairstyles and dress), non-violent protests (sit-ins), rejection of synthetic and industrial food products (vegetarianism, organic food)—all encapsulated by overtly political, 'corrupting' rock and roll music and sense-altering (rather than *mind*-altering) drugs (Howes, 2019, p. 21-27). A book published in 1962, *Silent Spring* (Carson, 1962), opens with a lamentation on the sensory changes (silence of wildlife, brown colours, absence of

fruits in bloom) of a town before and after the introduction of the pesticide DDT (p. 1-2). This book launched what many consider the beginning of the environmental movement in North America and perhaps the first popular realisation of the ravaging the natural world was beginning to take on a broad scale, from humans. Imagining ourselves outside it, above it, able to isolate and control it, and armed with an economic world-*view* that cannot account for it (or labels damage to it as an *external-ity)*, modern societies are firmly ensconced dualist notions of humans and nature. What is education's role in disassembling this illusory Cartesian ontology? The biodynamic farm is an intriguing place to begin this exploration because it presents a microcosm of the ecological systems that we are inextricable from and the agricultural production we are dependent on. It therefore can offer a multi-sensory, lived experience in overcoming Cartesianism. Such an engagement may allow for the possibility of reestablishing our being-in-the-world because of the *particular* way it engages our sensorium—reconnecting humans with the world to learn about it and its sustainable regeneration *also* through taste, smell and touch.

This section has illustrated that in Western history the senses have been variously appropriated to justify pleasure, revolution, discipline, oppression and social control of all stripes, while retaining certain hierarchical values. Today, these sensual trajectories have formed, and were formed by, the projects of modernity and colonialism and thus, are hegemonically present on a global scale today. To complete this history I now turn to contemporary ways of theorising the senses with specific regard to the ways they are relevant to this thesis. The next section will address the cultural and phenomenological elaborations of the senses and other theoretical principles requisite for sensory ethnography.

2.2 Culture, phenomenology, and sensory orientations for education

In this section the theories and practices that are both the foundations of and guiding principles for a sensory ethnography will be introduced. Rather than prescribing a ‘''how-to' account of doing ethnography with the senses in mind' (p. xv), sensory ethnography lays out a set of theoretical foundations that allow the researcher to practice a principled and morally-driven yet dynamic and open-ended method of inquiry. The openness required for sensory ethnography stems from its rootedness in the onto/epistemological commitments of anthropologist Tim Ingold, whose work I have already referred to. As well, there are a number of other scholars whose work and methodological developments in anthropology, geography, philosophy, sociology, art, design and even education, are com-

bined and synthesised in service of the sensory ethnographic project. I will begin by examining the senses as they are contemporarily theorised in representational and more-than-representational approaches before turning to theories of place, emplacement, and the ethical, collaborative and future-oriented moral perspective that is embedded in the sensory ethnographic methodology.

There are two main strands of sensory theory that are dealt with in sensory ethnography, the non-representational/more-than-representational/phenomenological strand developed by anthropologist Tim Ingold (e.g., 2000; 2011a); and the representational strand associated with David Howes (e.g., 1991b, 2003) and Constance Classen (e.g., 1993; 1997). I will first discuss theories involving *representational* sensory categories by reviewing Howes and Classen's emphasis on the cultural and social significance of the senses originating from their proposal for an anthropology of the senses. With this, I will demonstrate how a full recognition of the value of sensory categories troubles contemporary understandings of how humans learn.

Sarah Pink (2015) bolsters the 'emphasis on culture and the social significance of sensory models and meanings' by arguing that:

> There are ways that an analysis that attends to the level of culture and uses representational categories as its units of analysis can offer useful understandings of the world. Indeed, it is essential that the sensory ethnographer appreciates the cultural and (biographical) specificity of the sensory meanings and modalities people call on and the sets of discourses through which they mobilise embodied ways of knowing in social contexts. (p. 32)

While the representational approach is indeed useful for emplacing this thesis within the confluence of ideas about the senses in history, how they are relevant to education, and their usefulness in analysing and communicating research, this position is not uncontested. Indeed, from his phenomenological approach to the multisensoriality of experience, Tim Ingold (2000) has critiqued the anthropology of the senses for separating out sensory modalities at all, charging that:

> At the heart of this approach is a representationalist theory of knowledge, according to which people draw on the raw material of bodily sensation to build up an internal picture of what the world "out there" is like, on the basis of models or schemata received through their education in a particular tradition. The theory rests on the fundamental distinction between physical and cultural dimensions of perception, the former have to do with the registrations

> of sensations by the body and brain, the latter with the construction of representations in the mind. And despite vigorous protestations to the contrary (Howes, 1991b: 169-70), the anthropology of the senses remains fully committed to this version of Cartesian mind/body dualism. (p. 282-283)

A debate between the Howes/Classen, Ingold and Pink camps has since played out in the pages of the journal *Social Anthropology* (see Howes, 2010a, 2010b and Pink 2010a, 2010b; Howes 2011a, 2011b and Ingold 2011b, 2011c). However, Sarah Pink (2015) points out that this debate made clear that, in fact, these two approaches can coexist within sensory ethnography because they ultimately have different theoretical commitments: Howes and Classen's 'approach can be aligned with a culturalist and representational trajectory' (p. 11) which is well suited for documenting, analysing and communicating; while 'Ingold's [approach] is aligned with the non-representational or more-than-representational accounts associated with human geography' (p. 11), which may be regarded as being directed at the constitutive, interventionist, applied and future-oriented aspects of sensory ethnography. This thesis, then, takes direction from Fors, Bäckström and Pink (2013) who demonstrate the fusion of these approaches in their proposal for a theory of multisensory emplaced learning (also embedded within sensory ethnography) in which they:

> …use the five-sense sensorium as a set of analytical categories that enable us to produce entry points or routes to scholarly knowing in the ethnographic and representational contexts we examine… However, the starting point for our analysis is that sensory-embodied experience is multisensory; it is not in any essential way reducible to begin of one or another sensory modality, but rather contingent on and indeed part of the production of others. (p. 175)

Therefore, even if, as Ingold charges, the representational approach is 'committed' to Cartesain dualism, its usefulness in understanding sense categories as they are lived and manipulated—however illusory—in-the-world is essential for analytical and communicative purposes. Then, by keeping with Ingold's phenomenological onto/epistemological approach, I am able to retain a position that remains free of Cartesianism.

2.2.1 The cultural sensorium

To some extent I have already addressed this representational theoretical framework in the Western history of the senses and reflexivity above. As discussed earlier, the 'sensual turn''s spread into education/learning studies has been somewhat invisible—perhaps unsurprising for a field that has long privileged language, text and images (i.e., sight-based technologies) as the epistemological wellsprings of knowledge (Classen, 1999; Gershon, 2011). A more concentrated discussion of Howes and Classen's work is presented here.

Howes and Classen start with the notion that cultures elaborate and emphasise different senses for different purposes, creating a kind of sense-ratio, and that the formation of these 'sensory models not only affect how people perceive the world, they affect how they relate to each other: sensory relations are social relations' (Howes, 2003, p. 55). Significantly, awareness is drawn to the fact that different societies at different times and places have varying ideas about what qualifies as a sense. As we have seen from the ancient Greeks to the present, Western cultures have typically adhered to a five-sense ratio of sight, sound, touch, smell and taste—with an occasional sixth sense thrown in, while other societies and cultures may recognise more or less senses, as when the the Anlo-Ewe of Ghana recognise balance as a sense (Geurts, 2002). Meanwhile modern science now recognises at least nine different senses, which is even reflected in some Montessori curriculums (Glynis_h, 2018). What we can take away from these varieties of sense experience is that, far from the existence of some universally dominant or objective sensory modality, no matter how many senses a given group recognises, their cultural elaboration matters: for it is their cultural weight which opens the door for how people perceive and act in the world. Further, as we have seen already, to give objective dominance to one sense is to marginalise other ways of being that do not hold homologous sensory values. It is from this standing that Howes and Classen begin their project by taking aim at the sense of sight. For example, on the back cover of *The Variety of Sensory Experience,* David Howes' (1991c) first editorial foray into sense-work, we find an excerpt from the Foreword of the book, written by a prominent anthropologist of religion, Michael Lambek. It reads:

> My first impression of this book is one of bedazzlement. A dazzling of multiple facets, cut from the nuggets of cultural descriptions and revealed by the strongly focused light that Howes and his cohort cast upon them…Like the invention of the microscope it opens up for our inspection another dimension of the world that we had hitherto missed…
>
> Bedazzlement leaves a splinter in the eye. My second reaction is to instantly retract all the visual imagery in which I have just represented my experience and invited yours, to recompose it in the key

> of taste or smell, sound or touch, or better still some delicious polyphonous mix of these. This book will make you scratch with interest against the rub of its ideas, direct you to portions of your anatomy you never imagined could itch. It is a harmonious feast of varied yet balanced proportions, and Indonesian rijstaffel of delicacies to make you salivate, to satisfy your palate, and to stir your digestive juices into postprandial eructation… (Back cover)

This evocative, if hyperbolic, excerpt directs us to a first theoretical principle of the sensory project and one that is sounded throughout the edited volume: that the West's cultural emphasis on sight as the most 'objective' and 'knowledgeable' of the senses is, in fact, distinctly cultural. This means that all of our sensory modalities are capable of knowledge, and vision is but one of myriad ways of engaging, and understanding your engagement, with the world. By relinquishing the primacy of sight and considering that other sense categories might also be considered just as valuable, it becomes possible to grasp the diversity of ways of knowing (read: sensing) the world, and thus better understand what it means *to be human.* As we saw above, the Western emphasis on sight is a key driver—long hidden from view—of the colonial, hegemonic regimes embodied in Western science, culture, philosophy, art, aesthetics, discipline, institutional organisation, and much else that now constitutes the modern world. Constance Classen (1998) holds a mirror to the hegemony of sight in (at least) North America:

> The Western world in general, and the academic world in particular, can be said to have a fixation with sight. This unisensoriality is somewhat obscured by the fact that the concept of sight, like an object reflects in a room of mirrors, has assumed so many different guises in our culture that it can provide us with the illusion of a complete sensorium. Paintings, photographs and films, for example, are said by some critics to represent and evoke non-visual sensations so well, that the non-visual senses can scarcely be said to be absent from these media. In many contemporary academic works sight is so endlessly analysed, and the other senses so consistently ignored, that the five senses would seem to consist of the colonial/patriarchal gaze, the scientific gaze, the erotic gaze, the capitalist gaze and the subversive glance. (p. 143)

The point is that senses are given meaning culturally, thus shaping cultural forms. It is not that sight is somehow necessarily phenomenologically dominant, but that particular cultural elaborations of senses in the Western historical context have had particular consequences for all social life, as we have touched upon already. Indeed, no matter how much emphasis a culture gives to one sense modality or another there is no denying the multi-sensoriality of everyday experience. This has been demonstrated by several authors, including Pink (2004), in her exploration of the multisensoriality

of gender and identity-making in the home; Classen, Howes, and Synnott (1994) in their extensive investigation of olfactory symbolism in Western cultures—despite its denigration by the likes of Freud (Howes, 2003, p. 193-203)—and by Tilley (2006) in his ethnography of gardeners in England and Sweden which shows that despite what people *report* is the most important sense in their gardening work, there is no scenario in which only one sense is engaged in gardening. In applying these notions of the senses to formal education, the dearth and narrowness of sensory experiences that constitute it, is exposed. What then, are the implications of elaborating particular senses over others in the classroom? It is to education that I now turn.

Education reformers who call for more critical thinking or less testing may understand that those things are essential for more holistic forms of education, but they still tend to be advocating for a model of school that privileges vision, hearing, and to a restricted extent, touch. Such sensory aspects of the classroom can be indicated by the educational tools used in the classroom, such as books (sight), maps (sight), computers (sight and touch), or an activity like writing notes while listening to a lecture (sight, sound, touch) (Classen, 1999). The elevation of these ‘ways to wisdom’ (p. 270) retains the assumption that smell and taste in particular are the sense modalities of animals and not worthy of cultivation. With such educational circumstances still dominant today, would a remodelling of education and learning that explicitly accounts for and engages the whole sensorium in the move toward sustainability be a worthy endeavour? Such a sentiment was passionately stated by Anita Rampal of Delhi University at the opening panel of Burning Questions 2019 at the University of Oulu, when she insisted that education must ‘work *beyond* paper and pencil’.

To further illustrate how a sensory approach in education might shift our understandings of its very meaning, I will briefly consider Howard Gardner’s theory of multiple intelligences. This theory has become, in my experience, conventional wisdom in the United States (it was part of my U.S.-based teacher licensee course only two years ago). Originally proposed in 1983 and since 'updated,' Gardner (2011/1983) lays out his theory in his book *Frames of Mind* (the title itself a dead giveaway of mind-centric Cartesianism) which, quite rightly, proposes that humans learn in myriad ways. To being, however, Gardner’s entire multiple intelligences project is based firmly in the neuro/bio/psychological paradigms (2011, p. 33-61) of the 1970s and 80’s that have been critiqued by Howes (e.g., 1991a, 2003), Geurts (2002), and others, for eschewing the sociality of learning. Though not aimed at multiple intelligences explicitly, Tim Ingold (e.g. 2000, 2011a) has made deeply compelling critiques of the deep-seated assumptions of mainstream biology and evolutionary 'theories of mind' in

which the multiple intelligences are based. Second, Gardner's list of eight intelligences implicate only three sensory modalities (as they are used in Western cultures), in different combinations: vision, hearing and touch. According to Gardner (2011), nobody learns well through taste or smell, or at least gustation and olfaction 'have little special value across cultures' (p. 65), a claim which he appears not to have updated since 1983 despite a large body of work to the contrary. Immediately, the eschewing of these sense categories dooms the theory of multiple intelligences to fail, especially in light of recent work by Korsmeyer and Sutton (2011) who propose the concept of 'gustemology' in which taste is 'a total social fact' that is bound up in place and memory and very much encompasses visual, tactile, auditory and olfactory dimensions of experience (p. 469-470). Hence, as Gardner foregoes the inclusion of the gustatory or the olfactory in any of his intelligences, he is tacitly relegating them to the Aristotelian realm of the animal, therefore reinforcing the notion that humans are above and beyond the natural, material and non-human world—a thoroughly unsustainable, Cartesian-based starting point of how humans make their way through the world.

Gardner makes an addendum to his theory (1999) to include the category of the 'naturalist,' who is supposedly skilled at 'identifying,' 'categorising', or 'distinguishing' flora and fauna and other aspects of the natural world 'through ordinary vision or magnification—or non-visual means' such as 'touch' (p. 48-49). However, just as the naturalist-philosophers of the eighteenth and nineteenth century hid the sensuous engagements in their work and emphasised the primacy and objectivity of their vision (e.g. Roberts, 2019), so does Gardner's naturalist who is skilled, apparently, at identifying natural phenomena almost exclusively by sight. Could it be the case that some of Gardner's intelligences might have no place in certain environments? Or that certain environments render completely new forms of intelligences? It seems to me that the theory of multiple intelligences begins to break down further when one considers that ever since humans have walked the planet, existent environmental conditions have required greatly different types of intelligences—not all of which are encompassed by Gardner's. As Ingold asserts, 'education is a practice of attention…it is through attention that knowledge is both generated and carried on'…'in the context of an active engagement with the constituents of his or her surroundings' (Ingold, 2018, p. 2; Ingold, 2000, p. 5). This notion of education as attention begs us to consider the significance of environmental conditions. Indeed, it is hard to imagine an ancient ancestor not being a good 'naturalist' because they are rather pre-disposed to be a 'visual-spatial' learner, and visual-spatial intelligence is just not conducive to living under a dark rainforest canopy where, other than colours, sight becomes largely redundant relative to smell, sound and taste in the identification of one's environment. Steven Feld (2005), in his longtime

work with the Kaluli in Papua New Guinea, intimates these exact environmental/cultural circumstances in which ‘the locational information available from sound in this environment often greatly exceeds that available from vision, in both variety and salience’. Such a remark points to environmental factors as being significant in how one might gain 'intelligence', casting significant doubt on the primacy Gardner gives to neurological systems and vision: else he may have defined an ‘auditory-spatial’ intelligence rather than his proposed 'visual-spatial' category[10]. Therefore, even as Gardner has expanded our notion of the variety of intelligences that can exist, he simultaneously limits it by not giving enough credence to the unity of body-mind-environment conditions, overemphasising the 'inner' states of neurological and biological being, and pre-defining types of intelligence—a result of his theories being rooted in Cartesian dualism.

My point is not to denigrate sight as a route to knowledge or learning, but that sight can be both more *and* less practically or symbolically useful/meaningful than any one sense at any given time, depending on the demands of one’s environmental conditions (cultural, natural, non-human, etc.); and that ‘tendencies for sensory dominance always change contextually with bodily emplacement’ (Feld, 2005, p. 184). Neither is my point that current understandings of how people learn in modern education systems are inherently wrong, rather, it is that the *possibility* to learn through differential elaborations of attention to the senses—that might, for example, be judged as more effective for coming to deeper understandings of ecological and sustainable practices—cannot materialise from within a predefined set of 'intelligences,' but rather must be a process of mutually constituent growth *through* correspondence within one’s total environment (Inogld, 2018a). This, fundamentally, means a revaluation of how environmental and sustainability education—even, ideally, *all* formal education—develops in, with, and for the anthropocene.

Having established how a representational approach to sensation can provoke new ways of understanding and conceptualising how humans learn, I will now turn to the phenomenological approach to the senses employed by sensory ethnography and at the onto/epistemological core of this project.

2.2.2. Phenomenological approach to the senses

[10] Feld’s editorial work with fellow anthropologist Keith Basso, in their landmark reader *Senses of Place (*1996), has had a resounding effect in anthropology, geography and even education, inspiring the development of the concept of emplacement (Pink, 2015) and, intriguingly, place-based education (Tuck & McKenzie, 2015).

The scholarly trajectory that brings together the phenomenological aspects of sensory ethnography spans more than a century and counts several prominent social theorists, thereby exceeding the scope of this project. Rather than produce a history or genealogy of this trajectory, I will focus on the principle theorists relied upon for setting the foundations for the totality of sensory ethnographic work, with a brief mention to the theoretical tradition in which they are situated.

If the sensory project of David Howes and Constance Classen urges us to attend to representational and social constructions of the senses, it is the anthropologist Tim Ingold whose influential work (e.g., 2000, 2011a, 2013, 2015) undergirds a significant proportion of the ontological and epistemological movements in sensory studies (and increasingly in art, architecture and design studies), including for doing sensory ethnography. Ingold's work, building on a long tradition of social theorists seeking to overthrow 'Cartesian rationalism' and dethrone cognition as the seat of knowing the world 'out there', has drawn frequently from Martin Heidegger, Gregory Bateson, James Gibson and Maurice Merleau-Ponty to assert their common premise that 'every person is, before all else, a being-in-the-world' (Ingold, 2000, p. 168-69). Ingold (2000), in a series of essays, takes aim at collapsing a host of traditional oppositions that are deep-seated in the scientific thinking of biology, neo-darwinian evolutionary theory, sociology, psychology *and* anthropology (i.e. nature-culture, biological-social, organism-environment, individual-society, personal-social, etc.). This is to recognise that these traditional dualisms are in fact inextricable from one another. The crux of his arguments, as he has elaborated in subsequent works (e.g. 2011, 2018a), is that dissolving these dualities is paramount to liberating and creating sustainable scientific inquiry and a sustainable world. Ingold (2000) argues that the 'agent-in-an-environment rather than the isolated, self-contained individual' is the starting point from which inquiry must start, meaning 'such processes as thinking, perceiving, remembering and learning have to be studied within the ecological contexts of people's interrelations with their environments' because 'the mind and its properties are not given in advance of the individual's entry into the social world, but are rather fashioned through a lifelong history of involvement in relationships with others' (p. 171). Ingold epistemologically privileges movement as the basis for knowing, stating '…knowing, like the perception of the environment in general, proceeds along paths of observation' (2000, p. 229), or in other words 'we know *as* we go, not *before* we go' (p. 230, italics original). Such onto/epistemological positioning flies against much of twentieth century cognitive psychological science that has been so important in education and learning—and indeed, Ingold has recently brought his case directly to bear on education and learning studies (i.e. Ingold, 2018a),

building on the work of John Dewey, Gert Biesta, Jan Masschelein, Lave and Wenger, and Deleuze and Guattari, among others, to support his thesis.

Ingold's ideas also form the bedrock of doing sensory ethnography. However, he consistently employs his onto/epistemological commitments as foundations from which *anthropology*, as a discipline and field, must henceforth spring from. In doing so, he makes a resolute declaration that despite their frequent bunching together and dependence on each other, anthropology and ethnography are not the same thing (Ingold, 2011a, p. 229-243). Ingold posits the former as 'an inquiry into the conditions and possibilities of human life in the world' (p. 242). Of utmost importance is that anthropology:

> is not a study *of* at all, but a study *with*…Immersed with [people] in an environment of joint activity, [anthropologists] learn to see things (or hear them, or touch them) in the ways their teachers and companions do…in the world, and *not* from the armchair—that this world is not just what we think *about* but what we think *with,* and that in its thinking the mind wanders along pathways extending far beyond the envelope of the skin. (p. 238, original italics)

Ethnography '*is not* a method', Ingold (2011a) states, while noting that it is not more or less honourable or important than anthropology (p. 242, original italics). He rather insists that ethnography has methods of its own which constitute it as 'a practice of verbal description…[that]…describe[s] principally in writing, how the people of some place and time perceive the world and how they act in it (pp. 242-243). Intriguingly, and despite Ingold's insistence that anthropology and ethnography are not the same, the very onto/epistemologies he promotes in anthropology are also embedded in the principles of Pink's (2015) sensory ethnography, effectively blurring the lines between Ingold's delineations of anthropology and ethnography.

For sensory ethnography, this blurring of lines means bringing Ingold's anthropological ethos, a 'with-ness', into a practice of methods—ethnography—that tends to make 'of-ness' (Ingold, 2011a, p. 241). This blurred union is achieved by focusing on the multisensoriality of everyday life and what Ingold calls the '*possibilities* of human life' (p. 242, my italics). As such, Pink (2015) proposes sensory ethnography as a future-oriented, collaborative and participative practice that has parallels with others (e.g., Slow Food) who seek to change the world for the better (p. 69) The result is a moral perspective in which Ingold's phenomenological approach is embedded and that aims to en-

gage and intervene in an uncertain future. Crucial here is the future-orientation of both research agendas, described by Pink as our quotidian, everyday experience of being-in-the-world as:

> …not just related to the past and the present, but rather part of the ways in which the future is present in our lives as we live them, and as we ongoingly slip over the edge of the present into the immediate future. This applies equally to us as researchers as it does to the people who participate in our projects. (p. 193)

Such an approach helps to frame sensory ethnographic practice in what follows as an invitation, rather than a prescriptive agenda, for researchers to engage in a form of research practice 'that might inspire, direct or be part of processes of intervention and change' (p. 194). Further, this invites us to understand sensory ethnography itself as a practice of education (and therefore Ingoldian anthropology). This openness, however, requires an examination of the fundamental principles of sensory ethnography, some of them already alluded to above, regarding place and emplacement, learning and knowing.

2.3 Sensory ethnography: Theory and/as methodology

Sensory ethnography relies on the theoretical foundations of theories of place and emplacement. The notion of emplacement might be defined simply as 'the sensuous interrelationship of body-mind-environment' (Howes, 2005b, p. 7). This definition however, needs elaboration regarding 'place' (and its relation to space) in order to be more easily grasped in a sensory ethnographic context. As spatial theorising has grown in importance among social science disciplines in the past several decades, it has yielded a score of theoretical developments emanating from various disciplines. In the case of sensory ethnography, theorising in philosophy, geography, and anthropology has provided the basis for thinking about place and emplacement.

2.3.1 Embodiment, emplacement and place

In their edited volume *Culture, Power, Place: Explorations in Critical Anthropology*, Gupta and Ferguson (1997a) critique popular notions that regard the 'world of human differences…as a diversity of separate societies, each with its own *culture*' (1997b, p. 1, my italics). In my own experiences living in the United States and Japan, this statement does indeed seem to reflect a popular imaginary that many people assume regarding culture. In breaking culture and place apart from each other,

Gupta and Ferguson give rise to new questions for doing ethnography across disciplines (Pink, 2015). For sensory ethnography, these questions have to do with the flow of political and power relations as they intersect with 'our everyday embodied sensory engagements in our environments' (p. 33). Pink asks:

> How can place be defined if it is something that is not fixed or enclosed, that is constituted as much through the flows that link it to other locations, persons and things, as it is through what goes on 'inside' it? And second, given that places are continually constituted, rather than fixed, then how can we understand the role of the emplaced ethnographer as a participant in and eventually author of the places she or he studies? (p. 33)

In order to answer these questions, Pink proposes an examination of the political and phenomenological dimensions of place and space. This requires a critical theoretical move that undoes the notion of place as bounded, thereby facilitating 'an understanding of ethnographic places as both based in human perception and open' (p. 33-4). I will first elaborate the idea of emplacement.

In proposing the notion of embodiment, anthropologist Thomas Csordas draws from Merleau-Ponty's work on perception and Pierre Bourdieu's work (who himself drew from anthropologist Marcel Mauss and his notion of 'body techniques') on practice and habitus, proposing a paradigm for understanding embodiment methodologically (Csordas, 1990, p. 7). This particular attempt to dissolve mind/body and subject/object dualities, resonated with contemporary work by Jackson (1989) and Stoller (1989), inspiring a spate of works in the anthropological and geographical literature that emphasised the importance of the body—and especially the bodily senses (e.g., Okely, 1994; Rodaway, 1994; Seremetakis, 1996; Stoller, 1997). Almost twenty years and much theorising later, sensory ethnography elaborates an update—*emplacement*—beyond embodiment to consider the body within 'a place/event with a complex ecology' (Pink, 2011, p. 344). Pink argues that a theory of emplacement is theoretically advantageous because:

> It locates the performing/competing body within a wider ecology, allowing us to see it as an organism in relation to other organisms and its representations in relation to other representations. It should recognise both the specificity and intensity of the place event and its contingencies, but also the historicity of processes and their entanglements. (p. 354)

The idea that place is a kind of event is the next crucial step in conceptualising emplacement. Pink draws first from the philosopher Edward Casey in developing a concept of place that allows one to become emplaced. Casey (1996) inverts the (Kantian) notion of space as being something 'out there,' and place as something that is made inside of space (p. 16). Building on Merleau-Ponty, Casey argues that space and time are contained within, and arise from place, because it is the perceiving body 'in a place' that is the first point of knowing: 'there is no knowing or sensing a place except to be in that place, and to be in a place is to be in a position to perceive it (p. 18). Therefore, Casey's phenomenological conceptualisation of place privileges the immediacy and multisensoriality of lived experience—of being emplaced.

The geographer Doreen Massey also crucially informs sensory ethnography, however, she takes a somewhat different approach to Casey. Massey takes issue with popular conceptualisations of space as 'closed and abstract,' and re-situates it as a 'product of interrelations' that is always being made and is steeped in plurality (Massey, 2005, p. 9). Effectively, this challenges the phenomenological primacy of place as proposed by Casey and instead privileges the 'spatial politics' of place (in relation to space) over the phenomenology of place (Pink, 2015, p. 35). Thus, while Casey brings the phenomenology of multisensory perception to bear on place, Massey opens place and space up, seeing them 'as woven together out of ongoing stories, as a moment within power-geometries, as a particular constellation within the wider topographies of space, and as in process, as unfinished business' (p. 131). Despite this divergence between Casey and Massey, Pink argues that there is no reason to subordinate one notion to the other when she asks 'are they not implicated in the same process' (p. 36)? And indeed, Massey and Casey's theories overlap in many ways: where Massey refers to the 'throwntogetherness' of place, Casey speaks of the 'event' of place—both notions made up of flows: social, material, human, non-human, 'experiences, histories…languages and thoughts' (Pink, 2015, p. 34-8).

The significant departure between these two theorists lies in their understandings of how place is held together. In Casey's rendering, one can return to the *same* place, while for Massey, returning to the same place (for example, a sports arena or a forest) is impossible because place is contingent and constantly in motion (Massey, 2005, p. 130). In following Massey here, Pink (2011) demonstrates the notion of a 'place-event' through her own ethnographic fieldwork on bullfighting. When the bullfighter enters an arena the conditions of the weather, hostility of the crowd, behaviour of the animals, and the fighters own nerves are infinitely variable:

> As the *torero* advances across the arena he begins to know in new ways, he is in an environment that is always renewed. He can never 'go back' to the same arena—to the same place—because…the bullfight as place-event is each time reconstituted through the convergence of an intensity of things in process, emotions, sensations, persons, and narratives. They are sufficiently similar to previous bullfights to be recognisable as the same event, but they actually constitute a new place event. (pp. 349-50)

In order to reinforce and stabilise this notion of place-event, Pink draws from Ingold (2008) who also sees place as unbounded, produced through movement, and not something that *exists* but rather as something that *occurs* 'along the life paths of beings' (p. 1808). It follows that the occurrence of place sets the conditions for its inescapability, and therefore, our emplacement in world in which we are inextricable from.

To fully grasp the implications of our emplacement in an environment we must acknowledge how our biology is implicated in the notion. Indeed, going beyond the notion of embodiment, emplacement implicates one's total environment (something that embodiment often fails to fully recognise). This requires a full appreciation for the idea 'that the body *is* the human organism, and that the process of embodiment is one and the same as the development of that organism in its environment' (Ingold, 1998, p. 28, as cited in Downey, 2007, p. 223). Hence, our being-in-the-world. Following this, the emplaced body is constantly changing in relation to the environment and visa versa . This allows us to think about:

> …the body as part of a total environment, and recognise that the body provides us not simply with embodied knowing and skills that we use to act on or in that environment, but that the body itself is simultaneously physically transformed as part of this process. (Pink, 2011, p. 347)

For the body of the sensory ethnographer, then, emplacement comes from understanding places as occurrences or events and produced by the movement of things. Place, or our entanglement in a 'meshwork of paths' (Ingold, 2008, p. 1808), is inescapable, at once 'the context we inhabit and our site of investigation; it is what we are seeking to understand and it is where our sensory experiences are produced, defined and acted on' (Pink, 2015, p. 34).

Finally, Pink proposes the concept of 'ethnographic places' (p. 48). These are 'the places that we as ethnographers make when communicating about our research to others', and any medium utilised in ethnographic representation necessarily 'involves the combining, connecting and interweaving of theory, experience, reflection, discourse, memory and imagination' (p. 48). My own emplacement—in my fieldwork and ethnographic place that is *this thesis*—entails my own biographical trajectory, with its movement through particular places, times and contexts affording myriad sensations and biological changes that have affected and inspired the growth of this project. The notion of the ethnographic place also has implications for the presentation of this thesis in that one of the aims of sensory ethnography is to represent material that evokes all the senses. This may occur not only through textual techniques (e.g., *italics,* narrative change) but also through photographs, video, audio or even artefacts like recipes for a dish, all of which can invite the reader 'to imagine themselves into the places of both the ethnographer and the research participants represented' (Pink, 49). This connects with the moral perspective of sensory ethnography (rooted in a collaborative and participative approach that seeks to understand and intervene in the world to make it a better place). The geographer Douglas Porteous (1990) has proposed that sensory work is rooted in such moralities because the 'non-visual senses encourage us to be involved, and being involved, we may come to care' (as cited in Pink, 2015, p. 69). An understanding of the interconnectedness of the senses suggest however, that representing through visual ethnographic techniques of video can be a route to evoking the senses in ways that draw the reader into the sensory worlds of the ethnographer and research participants. Indeed, Pink suggests that video 'can be understood as medium through which the specificity and experience of the ethnographic place-event might be opened out or audience participation' in making the ethnographic place that exists as the writer writing and the reader reading this thesis. Pink concludes that this 'may offer a sense of intimacy, a route to intercultural understandings and ways of knowing not available as directly through written words (Pink, 2015, pp. 172-173). Indeed, such an approach fits with Stoller's (1997) sensuous one to scholarship and therefore works to dissolve the Cartesian edifice which I contend, drawing from Ingold (2000) is a prerequisite for any truly sustainable practice. This said, however, the sensory evocations that may come from video do so only because they are based on our *previous* multisensory experiences of being-in-the-world. Therefore, while I will attempt to utilise video, photography and text to evoke and invite the reader to sensory ways of knowing on the biodynamic farm, this is due to the boundedness of academic representation and is not meant to *replace* or stand-in equally for the actual experiences that transpired in the farm—it is thus an invitation to come closer, not to replicate exactly. In Chapter 3 will

return to biographically elaborate my own emplacement on the biodynamic farm, including the biological changes to my own (and co-researcher's) body.

2.3.2 Learning and knowing

The idea that learning, or indeed culture, is a process of transmission has been fiercely contested in the anthropological literature on knowledge, experience and learning (e.g. Harris, 2007; Ingold, 2001). In this section I will introduce the theoretical threads of learning and knowing considered in sensory ethnography and show how they connect with recent proposals for multisensory research in education (e.g., Fors, et al., 2013). I will finish the section by identifying the sensory poverty of current research and practice in education and learning.

Questions regarding how humans learn and know are bound up in the practice of, and fundamental for doing, sensory ethnography. These questions have also become central to phenomenological anthropologists and ethnographers in recent years as they have moved from customary questions of '*what* their subjects know' into '*how* we come to know as humans' (Marchand, 2010, p. S3, original italics). It is this 'how' question that has helped stimulate research on the multisensoriality of being human (e.g. sensory ethnography), seeing the senses as a route to understanding how humans learn and know in their daily lives. Recent investigations within anthropology have often involved ethnographic apprenticeships which have produced new theories of learning and knowing that challenge long-accepted conceptualisations of human brains as information processors (Ingold, 2001; Marchand, 2010). This has been done by introducing re-articulated notions of the ecological, biological, neurological, geographical and social/cultural aspects of learning and knowing (e.g. Harris, 2007; Ingold, 2000; Marchand, 2010; Pink, 2012).

It should be clear by now that the approach of this thesis is aligned with a paradigm (e.g. Ingold, 2000; Geurts, 2002) that considers learning, broadly, to be an inherently social and participatory act which is embodied, emplaced and fundamentally ecological (Ingold, 2000, p. 353). For sensory ethnography, questions of learning regard both the ethnographer and participants of the research. Pink (2015) argues that the learning of knowledge is important: '…because it should inform our understandings of how we as ethnographers might learn through our sensory, embodied and emplaced experiences, and…because it raises a research question: How do the people who participate in our research learn and know' (p. 39)? Indeed, it is to these two questions that my own analysis will ad-

dress: my embodied, emplaced position as sensory ethnographer, and the embodied, emplaced learning of participants in my research. In addressing these questions, multisensory and ecological ways of knowing, learning and doing in practice raise possibilities for coming to deeper understandings of *how* people might learn about environmental sustainability through their whole bodies. This, perhaps, may suggest a rethinking of how sustainability is addressed in formal education settings, or education more broadly, in terms of institutional commitments, philosophies and structures, teacher training and pedagogies.

The idea (in academia, at least) that learning and knowing is situated in practice is typically attributed to the work of Lave (1988), Lave and Wenger (1991) and Wenger (1998) and it is the work of these authors that has been built upon in the anthropological literature. Indeed, while Harris (2007) emphasises that knowledge is situated, specific, tied to particular moments and places, and 'is always changing and emerging' (p. 4), Wenger (1998) provides a platform for the sensory ethnographer to understand knowing and learning that aligns to the theory of place described above. He suggests that while learning and knowing may be situated in practice, it still necessarily 'involves an interaction between the local and the global' (p. 141). Put another way, while Harris (2007) and Casey (1996) emphasise our emplaced sensory, material and social-environmental relations, Wenger (1998) and Massey (2005) emphasise the 'the politics of space, including the wider (global) discourses and power relations that are also entangled in the 'local' places where ethnographers know through their practice' (Pink, 2015, p. 40). From this it becomes clear that knowing and learning are irreducible from the practice of sensory ethnography. Going further, it also becomes clear that learning is always implicated in the local and the global, situated in the ecology of the place-event. Bringing these ideas into education, then, requires an introduction to a theory of multisensory emplaced learning. Next I will connect these cultural, phenomenological and sensory ethnographic theoretical strands to learning and education to further buttress the case for adopting a multisensory orientation to pedagogy and research that depends on intimate corporeal knowledge of, and engagement with, sustainable practices, in the pursuit of a more sustainable world.

2.3.3 Multisensory emplaced learning

Fors et al. (2013) propose multisensory emplaced learning as an approach that creates new routes to address an age-old question: 'How do human experiences, practices, and culture figure and become interwoven in the process of learning?' (p. 182). In doing so they bring what is essentially a sensory

ethnographic approach to education and learning studies, but emphasise that this approach advocates for ‘the interweaving of a new strand in education studies…with existing approaches’, as opposed to a wholly new approach in an increasingly fragmented field (p. 170-1).

Fors et al. (2013) critique and build from theories of situated learning and cognition, contending that while these theories do place value on learning 'in context', they still ignore ‘the question of how the 'in context' is constituted’, and moreover that the concept of ‘context’ itself too often employed with vagueness and ambiguity (p. 171-3). A proposed solution to this problem lies in bringing the theoretical moves outlined above for doing sensory ethnography. Reiterating this approach through a theory of multisensory emplaced learning means that the onto/epistemological starting point for analysis ‘is that sensory-embodied experience is multisensory’ and it cannot ‘in any essential way’ be reduced to ‘one or another sensory modality, but rather…is contingent on and indeed part of the production of others’ (p. 175). This however, does not preclude the usage of the modern Western five-sense sensorium from the research process (if indeed, the research is located in the modern West, as this thesis is). Sensory categories, suggest the authors, are a useful research paradigm for engaging with ‘an analytical process that both recognises their status as culturally constructed (and not always stable) categories and engages them as routes to focus on elements of learning as a multisensory process’ (p. 175).

The researchers apply their approach to three situations of learning: digital media learning through touch, tasting or 'trying' food in the context of Slow Food events, and skateboarding as aural-kinaesthetic learning. In doing so they aim to show ‘the practical ways in which learning is situated in forms of movement that are both part of and constitutive of environments—as part of the place-event’ (p. 182). By ‘re-situating situated learning’ in multisensory emplaced contexts, a theory of multisensory emplaced learning allows ‘practical routes’ for researchers to bypass the traditional mind-body focus in learning studies and instead focus on how multisensory perception in and with a particular environment might affect processes of learning (p. 182). Thus, the same theoretical constructs required for doing sensory ethnography are also at play in multisensory emplaced learning theory. And while all the contexts presented in Fors et al. (2013) document instances of informal learning, there is plenty of impetus to extend such a theory to formal education contexts. Indeed, this indicates the potentialities that sensory ethnographic research has for research in learning and education and especially—as I argue in this thesis—in terms of education concerned with sustainability. For example, investigating informal learning that occurs through the experiences of food and eating

in a school cafeteria, or the ways in which sustainability education is implemented in (or outside of) school classrooms, might generate new insights and understandings for redesigning (in)formal educational spaces. These contexts contain extraordinary potential for coming to understand *how* it is that emplaced pupils come to know about the world through all their senses, therefore raising the possibility of designing multisensory learning environments that engage students in sustainable practice.

Research into the potential for multisensory emplaced learning—which ideally would influence learning and pedagogy in practice—has thus far been scant. Elizabeth Ellsworth (2005) has reasoned that such research is likely uncommon because of the grip that 'modern linguistics, semiology, sociology and…cognitive psychology' have maintained on educators, and that research that examines learning as ecological and multisensorial pushes:

> …up against the limitations of [those discipline's] scientific, philosophical, and political assumptions and practices. They especially challenge those assumptions and practices whose histories have privileged language over sensation, objects of experience over subjects of experience, the rational over the affective, and knowledge as a tool for prediction and control over learning as play and pleasure. (p. 2)

Fors et al. (2013) note that dance studies, for example, have long considered kinaesthetic learning as a topic of investigation. Generally, however, 'studies of learning processes that embrace the body as a multisensory unit, entangled in irreducible ways with its environments and not necessarily structured primarily by the means of language, are hard to find' in education research (p. 174). It may be noted that this lack of attention to multisensoriality links amicably with the colonial, hegemonic histories of the senses I have already presented above. Indeed, it is my hope that the trajectory of this thesis—and its aim to trouble the world of education and learning research and practice—is becoming clearer. Next I turn to address the trajectory of one contemporary example of explicit formal education.

2.3.4. Sensually explicit education

One of the earliest instances of explicit sensory education in the modern West can be found in the research of French physician Jean Marc Gaspard Itard, who specialised in working with children with disabilities. Inspired by the sensationalist philosophies—which rubbed against the dominant,

Kantian order of the day—of Étienne Bonnot de Condillac, Itard was responsible for developing a sensory education program for The Wild Boy of Averyon in the early nineteenth century (Classen, 1991, p. 47-60). The boy, Victor, it is estimated, was near twelve years old and had been living on his own in the forest near Averyon, France for about six years. After eventually being taken into custody he was sent to Paris to be studied by scientists who, among other things, ranked the order of his senses. One scientist, Pierre-Joseph Bonnaterre, wrote: '[t]he sense of smell is first and most perfected, taste is second, or rather these senses are but one; vision occupies the position of third importance, hearing the fourth, and touch the last' (Bonnaterre, 1976, as cited in Classen, 1991, p. 49). Another doctor of mental health, Phillipe Pinel, determined that the intelligence of the boy was deficient based on his imperfect sense of touch—as touch was *the* sense of the intellect, in Pinel's view. Disagreeing with both of these prognoses was Itard, who put Victor's idiosyncrasies—being attentive to a nut being cracked but not a pistol being fired; recognising companions by smell; or his love of nuts and vegetables and disdain for rich foods, even when hungry—down to his isolation in the wild rather than declaring him 'intellectually deficient' as others had done (Classen, 1991, p. 49). Itard worked with Victor on refining his senses, by developing a training program that included especially tactile, auditory and visual abilities, as well as working diligently on his sense of taste, which Itard considered 'a gift of civilisation' (Itard, 1972, cited in Classen, p. 58). The sense of smell, though Victor's most developed, was deemed unworthy of further investigation (Classen, 1991, p. 58). Itard considered Victor competently socialised after five years of work, but, deeming that his intellectual facilities could not be augmented any further, discontinued the training.

From this case there are a few notes of interest for my present purposes. First, is to point out Bonnaterre's prognosis of Victor (and Itard's training program to some extent) utilised the dominant sensory order of the times to inform his prognosis. Second, Pinel's prognosis points to the fact that not everyone was in perfect agreement about the senses (at least in terms of sight, hearing and touch). Third is the way in which Itard undertook his sensory education. For example, a strong focus on taste may be seen as a nod to eighteenth and nineteenth century codes of 'aesthetic discernment'—to refine Victor's taste was to civilise him (Itard, 1972, cited in Classen, 1991, p. 58). However, in deciding not to pursue smell (even though Itard recognised their unity) it could be said that Itard partially gave in somewhat to contemporary influences. Finally, this case is particularly significant for contemporary education because it was the sensory training program that Itard developed (with his student Edouard Séguin) that Maria Montessori adapted in the development of her Montessori Method (Classen, 1991, p. 57, f.n. 7; Gustafsson, 2018, p. 1451). Thus, Montessori Method can be

construed as a modern evolution of the sensationalist, countercurrent philosophies of the Enlightenment associated with Condillac (Classen, 1991, p. 49).

With a global reach, the Montessori Method is probably the most well-known example of an educational program that focuses explicitly on the senses[11], doing so by way of sensory 'exercises.' As previously noted, the Montessori Method currently recognises at least nine different senses, a number that matches some but not all recent estimations from neuroscience[12]. The introduction of the Montessori methodologies at the beginning of the twentieth century marked a significant departure from existing forms of education that had been based in the behavioural methods of training and control addressed earlier (Gustafsson, 2018, p. 1446). On top of explicit sensory exercises, there was the issue of the desk—an object Montessori derided for its socially disruptive qualities (p. 1449). Considering Montessori's drastic departure from previous educational forms it may be argued that the desk, with its origins in the formation of such compulsory education systems, is a physical object of control and individuation. Combined with a sensory perspective that characterises sitting as a sensory feature of training or control, the Montessori 'innovation' of eschewing desks breaches these educational origins that make the body docile (Foucault, 1995) by privileging movement (Ingold, 2000), and thus brings education into a new realm of possibility. In the Montessori case, then, the elimination of the desk becomes something of a prerequisite for incorporating a fuller range of sensory experiences. To be clear, I am not advocating for wholesale removal of desks from schools, rather, I am arguing that the absence of desks, from a sensory approach, is indicative of an educational program that values mobility as a central tenet of knowing and learning. To value movement and mobility *first*, I argue, must also become a central tenet of sustainability-focused education curricula, just as it is the starting place of inquiry for human perception—and thus knowing and learning in-the-world (Ingold, 2000). Gustafsson (2018) even insists that despite the absence of the word 'sustainability' from any of Montessori's original works, her methodologies are deeply relevant to contemporary notions of sustainability today (p. 1454) denoting an additional aspect of the Montessori Method's relevance to sustainability education efforts today.

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[11] Though there are others, such as Reggio Emilia, I will only address Montessori here for space constraints

[12] A simple internet search about the number of 'senses' there are yields responses that number anywhere from five to thirty-three senses. This, of course, then depends on what one considers a 'sense,' and as we have seen already, cultural elaborations of the senses seem to have a significant impact in shaping lived-in world, regardless of any 'actual' senses attributed by neuroscience.

It is not my intention, however, to pass a judgement on the merits or demerits of Montessori curricula. Instead, I mean to point out an interesting thread that aligns with this thesis: that one of the first widespread curriculums *not* connected to nation building projects (and therefore associated with training and control) embodied an ethic of care and aimed at fostering genuine growth with consideration toward the child's total environment (Weinberg, 2011). A defining, contrasting feature of the Montessori Method compared with mainstream education, I argue, was the profound, if subtle, change in the dis/use of the desk—a change that signified a push toward movement and explicit multisensory education.

I now move from the explicit sensory education of Maria Montessori to an illustration of the pursuit of explicit sensory education in a non-formal setting—the international Slow Food movement. I shall begin by outlining the origins and growth of the Slow Food movement broadly, before considering how its aims blend with the theoretical ingredients of this thesis.

2.4 Slow Food: 'Good, Clean and Fair'

I use the international Slow Food movement to draw together all the threads of this thesis—sensory, phenomenological, education and learning. I briefly outline the origins and trajectory of Slow Food and examine, in turn, its three foundational philosophical approaches to food: Good, Clean and Fair. I use the discussions here to then draw connections in my analysis between Slow Food and my fieldwork. This allows me to contextualise the global political power flows that permeate the place-events that occurred (and indeed, are still occurring) through sensory ethnographic research. The primary sources for this chapter are based on my readings of *Slow Food: The Case for Taste,* and *Slow Food Nation: Why Our Food Should Be Good, Clean and Fair* by Carlos Petrini (2001; 2007) and the websites of Slow Food International and Slow Food Foundation for Biodiversity.

The Slow Food organisation took root in Italy in the 1980s amidst growing malcontent with the perceived standardisation and flattening of taste embodied by multinational industrial food systems. The name of the organisation originates from a protest that was organised in 1986 by the eventual Slow Food founder and president, food writer Carlo Petrini. This demonstration took place at the Spanish Steps in Rome, being directed at the opening of the city's first McDonalds—an indication of the inherently political nature of the movement. Protesters were armed with handfuls of dried *penne,* a nod to the expressly non-militant, but gastronomic stance of the movement. This political

action, combined with an amiable approach to social change through the sensory category of taste, stirred the appetites of many toward reforming the increasingly industrially dominated food system. The number of Slow Food devotees grew through community outreach and education events based around the food and wine heritage of Italy, culminating three years later in the signing of the *Slow Food Manifesto* in Paris by fifteen nations. The guiding theoretical and behavioural propositions of the organisation revolve around learning about and spreading knowledge of material culture i.e. food and its production and processing. As Petrini (2001) has bluntly stated, 'it is pointless to sing the praises of fine wine or the smell of good bread if you don't know how they are produced' (p.12). Through grassroots efforts the organisation has spread around the world, made up of autonomous local chapters and various international networks in over 160 countries, counting nearly 100,000 official members and millions of other affiliates (Petrini, 2001; 2007; Slow Food: Our Network, 2015).

It is important to note, however, that the 'Slow' in Slow Food is not meant to indicate a simple or reductive opposition to the 'fast' in fast food, but rather connotes a much more nuanced proposition, one that sees slowness as having much wider implications for life generally. Petrini elaborates:

> So it is not just a question of opposing slow to fast, but rather of highlighting more important dichotomies, like carefulness and carelessness or attentiveness and haste: attentiveness to the selection of ingredients and the sequence of flavours, to how the food is prepared and the sensory stimuli it gives as it is consumed, to the way it is presented and the company with whom we share it. There are endless degrees of attentiveness, which in our view are just as important whenever and wherever we take nourishment, whether it is a meal at home or in a restaurant, a drink in an *osteria* or a sandwich at a bar, lunch in a school cafeteria or in an aeroplane. The real difference in quality among these experiences does not lie in how much time is devoted to them, but in the will and the capacity to experience them attentively. (p. 33)

Thus, *slow* can be understood rather as a concept that permeates our lives broadly but intimately. As well, in this suggested attentiveness we can find the theoretical threads of Ingold's (2001) development of the idea that education is a form of attention. The multisensory presences that our attention is directed toward, however, are contingent on cultural values and environments—both naturally occurring and built, experienced through all our senses. Thus, explicitly attending to food and its inextricable relations with environmental, social, economic, and visceral presences of being-in-the-world —presences which themselves are always-already entangled—characterises the essence of the Slow

Food movement, encapsulated in the slogan 'good, clean and fair.' For Slow Food, approaching the pleasure and enjoyment of food, then, is the entryway to revitalising environmental biodiversity and cultural food heritages, working through bestowing dignity on the peoples, lands and ecologies that produce such legacies.

By examining the Slow Food mantra 'good, clean and fair,' we can begin to understand how these three intersecting and interrelated principles contain the philosophical imperatives of Slow Food. While all three are relevant to the current project, the principles of 'good' and 'clean,' garner the most attention for this project on account of their deeply reciprocal coupling. Let us begin with the first of its name.

2.4.1. Good

The 'good' principle is grounded in sensory pleasure and exalts the idea of ‘naturalness’ (Petrini, 2007, pp. 102-109). Naturalness is defined as any food production technique that ‘respects nature, does not abuse it, does not waste it, does not irreparably alter its balance’ (p. 103). For Petrini, naturalness must be sought, not in the culinary techniques or processes that so often are the final product on the table, but in the raw materials of agriculture—tomatoes, peaches, beans, zucchini and more. For Petrini, ‘the raw material is what makes possible the cultivation and perception of the good’ (p. 102), and indeed, it is the raw materials of agriculture to which I draw our attention in Chapter 4.

Lamenting that the term 'pleasure' has been overcome by a misguided focus on health when it comes to food, Carlo Petrini is but one among a chorus of other food writers to take up such a mantle[13]. He laments that pleasure is unfairly conceived as being synonymous with ‘excess’ or ‘gluttony’ (vestiges of Christianity, as discussed above), positing the latter terms as being ‘incompatible with a steady routine’ (Petrini, 2001, pp. 20-21). He asserts that pleasure is a ‘right’ and something that can actually help to generate biodiversity (p. 62). Biologically and psychologically, Petrini argues, time inevitably creates a situation in which any pleasure, no matter how wonderful in the first, becomes habitual to the point where it is taken for granted:

> If habit blunts pleasure, then obviously we can’t organise our lives around it. What is the consequence? Simply that in order to live pleasurably, we need to broaden the range of things that give us pleasure, and that means learning to choose differently, even to live differently. From there to gas-

[13] In his book *In Defence of Food,* Michael Pollan (2008) makes a steadfast case for a return to the pleasures of food and away from the ideology of ‘nutritionism’ or, the focus on foods as merely ‘a sum of their nutrient parts’ (p. 28).

> tronomy is an obvious step: alimentary monoculture…blanks out the pleasures of the palate, because, no matter how much we like them, it makes them habitual. So embracing variety and difference really means performing an impossible trick every day—that of making an ephemeral and voluptuous pleasure last. (p. 21).

Underlying this link between pleasure is a position of openness to the world and therefore, to difference—notions that underly the ontological and methodological movements contained in this thesis.

Consider: over 80,000 edible plant species exist in the world, yet only 150 are cultivated for use for animals and humans, and further, *only* 30 crops produce 95% of the calories and proteins that humans consume (Petrini, 2001, p. 87; Füleky, 2009, Summary, para. 2). This does not paint a bright picture for biodiversity[14]. Thus, by seeking out and being open to new and diverse forms of pleasure through focusing on the category of taste, we might broaden our taste-scapes in terms of *food,* as opposed to the 'edible food-like substances' proffered in packages, boxes or jars and covered with diet and health claims (Pollan, 2008, p. 1). A by-product of such openness to food, then, is a resulting demand for biodiversity—a call that resounds loudly in the wake of the latest UN report on the global loss of biodiversity (IPBES, 2019). And indeed, there is no reason to think that it is not possible to expand our tastes beyond what we now know, through both recovering the old and discovering or creating the new—the propensity to do so, however, lies in the education of—and attention to—taste.[15]

Such a possibility aligns with the work of psychologists Elisabeth and Paul Rozin (2017/1981), who, in their classic discussion of 'flavour principles' consider how omnivorous humans have evolved in part because of their never-ending quest for expanding their tase and flavour palates. The results of which can be seen, heard, tasted, smelt, and felt in societies around the world. They conclude:

> …the prevalent human practice of adding characteristic combinations of flavours to most foods may be the result of our omnivorous heritage and an expression of our unique humanity: we have other things to do with food than merely consume it. (p. 43)

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[14] Try an experiment: drive around the countryside of almost any nation in Europe and see just how much arable land is used for agriculture—then consider the numbers above.

[15] For Slow Food, the biggest barriers to biodiversity, and which I am unable to adequately cover in this thesis, lie in the will of policy makers to make it possible for small-scale farm operations to operate in the current global economic systems (Slow Europe, 2015). Growing food in contexts like the biodynamic farm that promote 'natural' or regenerative agricultural practices farm, under free-market principles is extraordinarily difficult since the growing of such food requires acquiescence to the dictates of nature, not a superimposed economic system. This was made clear to me in my work and discussions with participants in the biodynamic farm.

As Petrini and Slow Food remind us, however, the last one hundred years have seen a dramatic flattening and standardisation of taste on a global scale—typically toward a profile that features sweetness, saltiness and *umami,* flavours that are well known to be physically and psychologically addictive. This circumstance is one that reinforces and continuously incentivises the reduction of biodiversity through, for example, the clearing of rainforest to grow cash crops like sugar cane, soy or corn—to be processed into sugar and used in a large array of boxed foods you can find in the supermarket—all of which require massive monocultures to fulfill the demands of the industrial food system that processes the food.

Petrini (2001) and Slow Food use 'good' as an umbrella concept for the right to sensory pleasure, recognising that, 'in a world organised around hamburgers, popcorn, and French fries and reeking of deep-frying oil and deodorant, taste represents a new moral imperative' (p. 71). Further, he concludes, 'if pleasure is a moral right, then an education and an ethics of taste become necessary and indeed indispensable for its attainment' (p. 72) How then, we must ask, might education help to open the path to a world that is characterised by diverse, ever-expanding taste-scapes that are indicative of healthy biodiversity? For Slow Food the answer inevitably lies in an education that attends to an explicit and multisensory education regarding food and its environmental, political, and social interconnectedness to biodiversity and the sustainable existence of human life. To do this requires 'reappropriating one's senses' (p. 99), with education as the key to doing so:

> The primary instruments that, when trained, can make it possible for anyone to choose an adequate and enjoyable diet are our senses. Slow Food endorses the primacy of sensory experience and treats eyesight, hearing, smell, touch, and taste as so many instruments of discernment, self-defence, and pleasure. The education of taste…is not so much a question of fighting a fundamentalist war against the spread of the hamburger as it is of informing, stimulating curiosity, [and] giving everyone the opportunity to choose. (p. 69)

2.4.2. Clean

'Clean is sustainable; it does not pollute, it does nothing to put the earth in a condition of ecological deficit,' and moreover the interrelationship of 'good' and 'clean' suggests that a 'clean product is of the greatest significance to taste' (Petrini, 2007, p. 128). Just as we saw in the 'good' principle, then, the 'clean' principle rests on an underlying notion of naturalness, only shifting the foci from sensory pleasure—which is at once personal, social and extends out into the world, recalling the 'visceral'—to the world of agricultural production, processing and transport and how the environment is impli-

cated in these processes. Noteworthy here is the matter of personal health. While certainly a consideration, the 'clean' principle takes the health of the environment rather than the health of people as its locus, reasoning that if the environment is healthy (read: biodiversity) then it follows that the humans who consume its products will also be healthy. This is an important point in the Slow Food philosophy, especially in the context of public discourses and educational curricula that tend to focus *solely* on food as either nutrition or energy. Such discourses—regarding pesticides and GMOs, for example—give primacy to individual health to the exclusion of environmental health, setting up a circumstance that treats a symptom rather than address the root of the problem. For Slow Food, this individualised way of considering the issue of health is misguided but widespread. For example, the growth and public prevalence of nutritional sciences can be seen as a response to problems that originate in a system built by industrial agriculture itself. It is this system of agriculture—literally rooted in the eroding industrial agricultural soils of the earth—that must be uprooted if food production is to be come 'clean'. The consequence being healthy soils and healthy bodies at once.

Perhaps it is useful to make an approximating analogy here. I ask: is focusing almost exclusively on personal health at the expense of the wider, interconnected environment 'out there,' tantamount to doing sensory ethnography but focusing almost exclusively on the phenomenological side of it, at the expense of the wider political-power-environmental flows that are inextricable from lived experience? To do so would be to neglect half of the sensory ethnographic project, and thus fail at producing a sensory ethnography. In the quest for health, then, to focus only on the personal, while obviously crucial, fails to consider the root causes that begin with industrial agriculture, resulting in a failure to adequately address the issue of public health.

Petrini claims that, '[a] soil that is neither stressed nor polluted will yield products that have superior sensory characteristics' (Petrini, 2007, p. 114). This leads us to the notion of sustainability which is central to the 'clean' principle. In being sustainable, it is of utmost importance that nothing 'unnatural' is introduced, first of all, into the agricultural process. As a rule, unnatural materialities and processes are to be outright rejected: pesticides, synthetic fertilisers and intensive methods (which require steroids and growth hormones in animals); preference for regional breeds or varieties over GMOs and monocultures represent an agricultural pathway that increases and reinforces biodiversity. On the whole, it is the total rejection of the industrial agricultural system—including organic produce that has succumbed to industrial models—which is advocated because, as Petrini (2007) insists:

> Even crops that do not involve the use of chemical agents can be unsustainable if they are part of the agroindustrial system of food production—if they reflect a reductionist and profit-oriented mindset, which takes no account of the environmental costs and which has no respect for the life of the earth and of those who live on it. (p. 121)

Such a position, to be clear, is not the outright rejection of all modern agricultural technologies in favour of some imagined past in which agriculture was easy and worked perfectly. In fact, modern technologies are essential for recovering the biodiversity that has been lost to us. The problem for Petrini is that up to the present, these new agricultural technologies have tended to be used for purposes of profit at the expense of biodiversity. This is indicated not only by loss of biodiversity, but also in the failed promise of industrial agriculture to feed the world: though our modern system has the capacity to feed 12 billion, it cannot adequately feed the present 7 billion (Petrini, 2007, p. 24) and often results in massive food waste while rendering ill or obese those it can feed.

2.4.3. Fair

The last principle aligns with notions, discussed elsewhere in this thesis, that the human organism and the natural, material world are inextricable from one another. Here, sustainability is the binding glue that pins social and economic factors (themselves inextricable from environmental ones) together in the pursuit of social justice. In particular, the focus of fairness comes down to social and economic respect for those (farmers, markets, chefs, etc) who are central to de-industrialising agriculture. The issues that fall under this principle are at the heart of the human condition and have to do with wages, respect, exploitation, slavery, food prices, land rights, government subsidies and more. For Slow Food, an equitable rendering of these social justice issues is a prerequisite for quality—if they are not met, the possibilities that food will be neither good nor clean are heightened. The plight of the agricultural worker is a global phenomenon and has been at least since European colonisation began and the tobacco and sugar trades got their starts on the backs of slaves. The coffee we drink or the fruits we buy, whether or not they are implicated in environmental degradation or regeneration, are dependent upon the work of other humans who deserve the same respect and dignity accorded to any other human. In an industrial agricultural system where the majority of land is (increasingly) owned by multinational companies to grow monocultures, however, the plight of agricultural workers often goes hand in hand.

Petrini praises organisations like FairTrade who do, and have done for quite some time, a commendable job of ensuring social and economic justice for agricultural workers[16]. However, Petrini also critiques their approach, which he suggests, 'ought to be combined with structural interventions in the producing communities and not just limited to the fixing of a fair price. FairTrade must never forget the other two aspects of quality: clean and good' (Petrini, 2007p. 138). Indeed, the focus on price-fixing to the exclusion of structural change is not sustainable from the standing of Slow Food.

In the past two decades Slow Food has begun to spread throughout Latin American, Africa, and Asia through efforts that resulted from problematising more traditional forms of development aid proffered by the Global North in the latter-half of the twentieth century. Petrini rejects this type of Western 'charity' that comes 'from above,' claiming that, 'it doesn't respect the cultural elements of populations and tends to see them as entities needing 'salvation,' and therefore 'conquest'' (Petrini, 2007, p. 98). Instead, Slow Food's stated aim is to 'recuperate and make known traditional knowledges', recognising that local and indigenous knowledges offer pathways to, for example, greater biodiversity. Indeed, a quote on the Slow Food website from Phrang Roy, a global indigenous rights leader, reads: 'If you look at a map of global agrobiodiversity hotspots you soon realise that they are identical with indigenous peoples' habitats' (Slow Food ITM, 2015). Slow Food projects such as the Ark of Taste and Presidia, which catalog and raise awareness for endangered plant and animal species, food production, and processing techniques, are central to showcasing the wealth of historical and traditional agricultural and food knowledges. Other programs that have roots in the 'fair' concept include the Indigenous Terra Madre Network and the Migrant Network, aimed at the empowerment—through agricultural and culinary means connected with 'good' and 'clean'—of those that are often at the highest risk of exploitation and land grabbing practices,.

I have tried to outline the most important theoretical positions of the Slow Food movement, especially as they are relevant to this thesis. Although there is not space here to provide a thorough treatment of the organisation, relevant aspects not discussed above will be elaborated as the need arises below. The positions outlined above are essential for contextualising practices on the biodynamic farm and Ecovillage within the wider, global flows and formations they constitute and are constituted by. In understanding the positions of Slow Food it becomes possible to view the activities taking place in the Ecovillage and the biodynamic farm as intimately connected with each other. Then, through focusing on the sensoriality of such activities, a picture of the sensory practices involved in pursuing sustainability and biodiversity, begins to emerge.

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[16] The origins of FairTrade in Europe in the 1960s—in the wake of war and within a period of rapid globalising processes—is one indication of long-standing labour issues in regard to global industrial agricultural issues.

3 EMPLACING THE RESEARCH

> *We don't receive wisdom; we must discover it for ourselves after a journey that no one can take for us or spare us.* —Marcel Proust, *Remembrance of things past*

The present chapter explores the autobiographical kinds of knowing and learning in-the-world, as opposed to in-the-school, that have most contributed to this project. The sensory ethnographic approach necessarily requires the use of some auto-ethnographic techniques in creating the ethnographic place that is this thesis (Pink, 2015, pp. 97-98). Therefore, I have found it important to situate and emplace myself in relation to the fieldwork through writing a sensuous autobiographical account of the life-ways that have brought me to, impacted, and affected the research I have undertaken for this thesis. In doing so I hope to more transparently and critically convey my research findings with honesty and integrity. Moreover, such an account allows for a sensuously situated and contextualised ethnography that helps to understand the place-events in which I was implicated in the biodynamic farm. As previously mentioned, this involves a consideration of my life's experiences, memories and reflections and fuses the sensuous with the theoretical (Stoller, 1997, p. xv). Indeed, 'To accept sensuousness in scholarship' Stoller argues, 'is to eject the conceit of control in which mind and body, self and other are considered separate' (p. xvii). Following this, the next two chapters are further attempts at textually dismantling Cartesianism in this thesis. In this chapter, I denote the sensuous by the use of *italics.*

3.1 Sensuous auto-biography

In coming to a full awareness of his own body, Michael Jackson (1989)—a forerunner of current phenomenological and embodied theorising in anthropology (not the late pop-star)—accords the practice of yoga:

> When I took courses in hatha yoga (under Iyengar-trained teachers) it was like unpicking the locks of a cage. I began to live my body in full awareness for the first time, feeling the breath, under my conscious control, fill my lungs, experiencing through extensions and asanas the embodied character of my will and consciousness. (p. 119)

For myself as well, it was a course in hatha yoga in my second year of university that contributed to opening a deeper awareness with my own body. These courses were compounded by other bodily ways of doing and learning in different and new contexts. For example, as a life-long player of organised basketball it wasn't until I began regularly playing with 'casual' players in university that I was made aware of the bodily habits I had developed through my life. My body instinctively ran cutting routes to break from defenders, knowingly 'boxed out' other bodies to gain the advantageous position for a rebound, or dropped into a defensive stance—a slight squatting position with arms spread wide and ready to slide my feet laterally with the offensive player's movement. The fact that these postures and positions had become my nature (as opposed to some 'second nature'), became clear as I continuously encountered the absence of such movements in many of my opponents. These realisations on the basketball court and in the yoga studio act as an entry point to this story and to denote a point in my life that changes to my bodily awareness began happening in earnest. To access the other half requires a walk back around through childhood before criss-crossing a route back to the present that deals with learning about food, environment and health.

I grew up in a poor, rural farming town in the high mountain plains of northern Arizona, U.S.A., amongst an extended family comprised of at least two generations of university graduates and educators, and two health-conscious parents—very different family circumstances than most of my peers. My father and his friends built our house out of traditional adobe bricks and modern rammed earth methods consisting of lots of mud, straw and a little concrete. This building style has been common for thousands of years in the southwest U.S. because of it excellent insulation in the sunny but chilly winters and hot, dry but rainy monsoon summers. We had gigantic solar panels that functioned to heat our water. Compared to almost everyone I knew in my town, we were not normal, especially when it came to eating and food. Growing up in a country that has a tendency to regard food as mere nutrition, or energy to be consumed at the lowest possible price, may be one indication of an under-appreciation of food. Or perhaps it suggests the country has played a key role in the industrialisation and standardisation of food and agriculture, taste and flavour, globally; and maybe, possibly, these two things are connected. Any way we slice it, this national context helps to situate my childhood experiences with food and eating.

My mother, a primary school and special education teacher, seemed to be the only mother I knew who baked her own bread (and cinnamon rolls and cookies!), tended her own garden, canned her

own jam, sourced food from the local farmer cooperative ('the co-op'), and made nearly every single meal from scratch. She often voiced her disgust with prepared 'TV dinners' that you could buy from the freezer section of the grocery store. I remember seeing TV dinners stacked up, spilling out of other people's shopping baskets at the store. The pictures on the packages looked so neat, so simple and so delicious. I so badly wanted to try them. When I would ask my mother if we could get some she would scoff and respond in a tone of absurdity: 'No way, John Wayne!'

My experience with friends and their families was different, but similar in some ways. During school lunch, for example, none of my friends would swap their classically American (and so heavily processed with added sugar and artificial flavours) peanut butter and jelly sandwich on pre-sliced, fluffy white 'store-bought' bread in exchange for my own organic peanut butter (from the co-op) and homemade cherry jam (picked from the bush at the behest of my mother) sandwich on homemade, crumbly brown bread. Indeed, I was surrounded by fluffy white bread peanut butter and jelly sandwiches in the lunch halls of primary school and I wanted nothing more than to trade my depressingly brown and crumbly sandwich with hard crusts for their soft and fluffy, stick-to-the-roof-of-your-mouth peanut butter and jelly. Nobody ever wanted to trade, probably because of the hard crust, I always thought. My friends' sandwiches often didn't even have crusts (if you can even call the exterior of soft fluffy white bread a 'crust') anymore because their parents had cut them off.

I now make my own bread at home, usually with around 50% whole wheat flour. A few weeks ago I made a peanut butter and jam (I refer to jam as the homemade version of jelly) sandwich with some organic peanut butter and some delicious jam made by a friend in Germany. It was not enjoyable. Sure, the bread is delicious and the peanut butter and jam are as well. But the combination of that dense brown bread and the peanut butter, despite the jam, rendered each bite extra dry with a 'mealy' feel inside the mouth. I got the same feeling again that I had had so many times during my childhood. Perhaps these flavours, textures and tastes are forever linked with those memories and I will always dislike it because of that. On the other hand, perhaps the combination of peanut butter and jam are simply not suited for dense, dry brown bread[17]*. That is, however, unless the brown bread is toasted first, giving it a crispy, crunchy texture that I think really compliments the salty peanut butter and sweet jam. Yum!*

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[17] In Japan, for example, where texture is one of the most important aspects of any food, the texture *fua fua* (the onomatopoeia for 'fluffy') is highly valued. The ubiquity of big fluffy white bread shows that the nation has whole-heartedly embraced it for sandwich making—and far beyond peanut butter and jelly. This, of course, began *after* WWII.

When the first fast-food restaurant (Taco Bell) opened in my home town it was an exciting time for everyone, but especially for me. It opened directly across the street from the new charter school that I attended for my final two years of primary school. Certainly this excitement rose due to the contrast to my food life at home and because of the Taco Bell TV commercials that I saw at my friends' houses[18]. I loved going over to friends' houses. It was only away from home that I could play video games and watch satellite TV, but I also knew I would be able to indulge in the edible things my parents never bought. This situation was seemingly constant throughout my childhood. Where all my friends' parents stored 24-packs of Coca Cola and Pepsi in the 'spare' refrigerator in the garage, I had tap water, and at best, an 'all-natural' sports drink called 'Recharge' for when I played basketball or baseball. Where all my friends consistently had some kind of sugary, gummy snack packed in their lunch, I had a plum or an orange, or on lucky days the best chocolate chip cookie in the world, if my mom had recently baked. Where all my friends got their parents to take them to Burger King for dinner, my father grilled hamburgers with ground beef purchased from friends who raised and butchered a small herd of grazing cattle every couple years. The same friends kept us stocked with fresh raw milk, complete with the thick cream-top and delivered in a giant glass jug—they were also the one's who helped my father build our house. While that grass-fed beef patty of my father's sounds mouth-watering today, and a fast-food burger reminds me of synthesized meat compounds, when I was a growing up all I knew was that the burger my father let me shape was always fat and obtuse. Definitely not the same as the fast-food places that made those perfectly thin, round patties that were the apple of my eye. I seemed, in this case, to have been taste-blind by my very own sight.

These days when I visit my mother and we bake together, comparing the flavours and textures of the natural yeasted, slow-rise breads that I grew up eating, she teases me about the time I went into a fit of anger (which I was liable to do when hungry) at her suggestion that she make me something for dinner rather than take me to a fast-food restaurant. 'It's homemade this! It's homemade that! Why can't we just eat like ***normal*** *people!' While I only vaguely remember yelling this at her, I will never forget these words because she has now immortalised them on an apron she made me recently. I even accused the toilet paper—because it was made from recycled paper and slightly brownish—of being 'whole wheat'.*

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[18] The most memorable commercial for me features insanely cheap food and the closing line, 'Change is good', a phrase I still use to this very day. See the Taco Bell Advertisement here. Note the narrator's qualifying of the word 'real' before 'cheddar cheese'—a ubiquitous feature of many fast-food advertisements in the U.S. and a tacit admission that everything else perhaps is synthetic.

Figure 2. From the left: three chiles rellenos (cheese-stuffed chilis), chimichanga (bean burrito, deep-fried and covered with red chile ‘enchilada sauce’ and cheese), refried beans and Spanish rice at Mi Nidito. Tucson, Arizona. August 16, 2018.

Despite all the foods that my mother made that I didn’t like, my mother made quite good Mexican food at home. Though it was never quite as good as the restaurants we sometimes went to, I never ceased asking her to make my favourite dishes: enchiladas (corn tortillas rolled with filling and

baked with chile sauce and cheese), chimichangas (figure 2), Mexican 'Spanich' rice, refried beans and fresh salsa with corn tortilla chips. She even made my favourite Taco Bell dish, the 7-layer burrito (beans, cheese, guacamole, sour cream, lettuce, rice, salsa). These dishes also happened to be the first things that my mother taught me to cook—or rather, that I cooked with her. I remember how excited I would get when she announced we could have Mexican food for dinner. While my older brother and younger sister always loved this as well, I was usually the most eager to help mom in the kitchen grating cheese, rolling enchiladas, or blending dried chiles to make a spicy enchilada sauce. These home food experiences were afforded by virtue of my mother learning the flavours and textures of Sonoran Mexican food as child. She grew up in the Arizona Sonoran Desert, in the town

of Tucson, Arizona, which shares some geographical (natural and cultural) heritage with the bordering northern state of Sonora, Mexico. This desert is notable for its 'saguaro' cacti that can grow up to ten meters tall (Figure 3), dry rivers and vigorous wildlife that includes wild pigs (javelina) on the desert floor hiding amongst green foliage of bushes, trees and cacti; mountain lions and secret waterfalls in the canyons outside the city; bears and winter snows in the pine forests that topped the highest of three surrounding peaks, Mt. Lemmon. The Sonoran desert is the most biodiverse desert on the planet and millions of years ago the valley where the city lies was an ocean, while the mountains were islands. Perhaps this former ocean bed and sky island landscape, with its relatively generous (compared to all other deserts) summer monsoon, is why the native peoples of this land, the Tohono O'odham, were able to begin practicing agriculture here nearly 4,000 years ago. Consequently, the desert-adapted native seeds of this region require very little water to grow, representing an important trait of biodiversity. In the early 1980s, a collaborative garden project between the Tohono O'odham Nation and agro-ecologist Gary Nabhan at the University of Arizona, resulted in a conservation effort of the desert's seeds called Native Seeds/SEARCH. The organisation acts as a seed bank and collects and catalogs Sonoran Desert heirloom seeds—seeds that have adapted to the soils over millenia. Varieties of crops suited for the desert climate—tepary beans, Sonoran white

Figure 3. Woman standing next to 100+ year old native *'saguaro'* cactus in Saguaro National Park. Tucson, Arizona. December 15, 2015.

wheat—have quite recently emerged as common raw ingredients in area homes and restaurants. The seeds can even be 'checked out' from the city library in Tucson.

The foods most typical of this region are made from a wide variety of fresh and dried, mild and spicy chilies, but also include fusions, or what is sometimes called 'borderlands cuisine', like chimichangas—deep-fried burritos. Burritos, despite their common association with California in much of the U.S.—and even in Japan—likely originate in northern Mexico, where several cities lay claim to them (in Sonora, Mexico they are called burros percherón). They are composed of a large, transparent flour tortilla made with flour, water, salt and lard. The most mouth-watering ones are made by being hand-stretched into a giant round shape, grilled on a large flat or domed grill called a 'comal,' then wrapped around any number of fillings, usually beans and cheese, or possibly beef, which has been the most common animal protein in the region since the start of colonial times. These wheat flour tortillas are the model for 'Tex-Mex' food, which is enormously popular all over the country (and increasingly the world, it seems). Tex-Mex flour tortillas typically are pale white, thick, chewy, non-transparent, and use vegetable shortening or another fat—but not lard. They also typically contain several other ingredients—whose names I usually cannot pronounce—beyond flour, water, salt and fat. These are the foodways contexts in which my mother grew up, and this is how she became accustomed to particular foods before creating the conditions for her children to do the same.

This description and depiction of the above environment serves to emplace myself—through natural, historical and cultural means—amongst the human and non-human components that have contributed significantly to establishing the emergent conditions of my growth in the world (Ingold, 2000, p. 87-88). This emplacement, then, as well as helping to mark my positionality as the researcher, also shows a process by which I have come to know, or discover, the world in which I grew up. In the text above, I attempt to work through both evocative description and sensual depiction, as Pink (2015) contends that ‘a rich combination of written and visual representation can create possibilities for engaging them in mutual meaning making’ (p. 168-9). Here, the photo of the food invites readers to imagine the gustatory or visceral senses of eating heavy, cheesy food while my textual description provides a context for what the food meant to me and how it has contributed to my emplacement—therefore the combination of photo and text work to bring this story into life. The photo of the giant cactus with a human nearby for scale is meant to evoke sensations that, perhaps, create some type of empathetic understanding and appreciation toward a place that the researcher

feels deeply shaped and impressed by and is therefore relevant, even if in minor ways, to the emplacement of the author.

By the time I made it to upper-secondary (high) school, my mother, finding it far less stressful to acquiesce to her children's unreasonable food demands, had largely given up on baking bread or maintaining the garden, and her canning and pickling jars gathered dust in the storage closet. At school I ate greasy, pre-frozen pizza smothered in thick processed cheese that sat atop soggy fried potatoes covered in ketchup; or else a hamburger whose questionable meat content, synthetic flavour and texture still linger on my tongue's memory. I had taken my newfound freedom of having a driving license and a car—a blue, 4-speed, 2-door 1972 BMW model 2002—that my father, a 'European car' technician, had salvaged. Newly mobile, I frequented the three (inter)national chain fast-food restaurants in my hometown. Increasingly, however, I found myself drawn to the family owned, fast-food burrito shop 'Alfonso's' and the small Mexican butcher and deli, 'Mercado,' that was housed in the old video rental shop. Significantly, Mercado shocked my awareness of what a difference in taste there was between the food I grew up eating at a home and my favourite, often americanised restaurants, and the borderlands food that was to be found further south of my hometown. The first time I ate at Mercado I remember thinking about how similar it was to the ones I had eaten down in the U.S./Mexico border town of Nogales. Indeed, some friends of mine had taken to referring to Mercado as 'Mexico,' as in 'Let's go to Mexico for lunch'. The green salsa was creamy and mild from the avocado, the red salsas ranged from fairly to extremely spicy and my friends and I would dare each other to eat tear-inducing spoonfuls. The Mercado made tacos on fresh corn tortillas with a variety of classic Sonoran fillings, my favourite being 'carne asada,' which is flank steak marinated in a blend of lemon, orange, onions and chilies, before being grilled over an extra hot flame to make the outside crisp. It is then cut into strips, against the grain of the meat to preserve the juices, then placed on the corn tortilla and topped with diced raw onion, fresh cilantro (coriander) and finished with fresh salsa to produce a combination of flavours and textures that make me homesick even as I write this. Overall, the tastes at Mercado were somehow fundamentally different than any other restaurant I'd been to in Northern Arizona and they were tastes that I began chasing in earnest as I moved to Tucson, in southern Arizona, for university.

After I started at the University of Arizona in Tucson, my aunt took me under her wing and began exposing me to new and different types of food. She was the restaurant critic for the local newspaper and would occasionally take me with her on restaurant reviews with my other cousins. We all tried

different dishes and discussed the tastes, flavours and textures and she asked our opinions, covertly jotting notes on a small notepad. She introduced me to flavours from around the world: Thai, Indian, Ethiopian, Japanese. She also hosted 'family dinner' at her house on Sundays. I remember calling my mom to tease her by saying 'Sorry mom, but Kathy is better at cooking!,' but she just replied 'Oh yeah, I agree!' It was around this time that I started really opening myself to trying new foods, adopting a 'try anything once' policy. Even foods that I had not previously liked became open to me again. I remember coming home one day and my roommate was sautéing some mushrooms. I always hated mushrooms, but on that day when I walked in the house it smelt fantastic. I asked what he was making 'Mushrooms. Try one.'. Not wanting to seem uncool, I accepted his offer, put the mushroom in my mouth and chewed. My first thought was 'Why did my mom never make mushrooms this way?!' Well perhaps she did, however, nobody had introduced me to them so casually, or cooked them so nicely, as far as I could remember. It was funny that it took me that long to wake up to that deep, earthy flavour of a good mushroom cooked in butter. My tastes were re-situating.

I began working in restaurants my first year of university. I had determined that the tips one could make as a server in the United States (typically 18-20% on top of the total bill) were likely the best way to sustain my living expenses as a student. I started working as a server in a national chain buffet restaurant. This lasted one year and was the beginning of my still-present indigestion issues, acid reflux, and heartburn. I remember that I became fairly disgusted by the food there—mostly deep fried items, grilled steak, or any number of dishes swimming in sauces made of who-knows-what. It was the first time in my life that I frequently and consistently encountered individuals who were overweight and obese. Customers often ate up to three or four dinner plates filled with edible food-like substances, along with steak or a little 'salad'. I cannot recall how many times I saw someone return from the salad bar with a full plate that contained no green or any other colours other than the thick, white or off-pink dressing they had dumped all over the lettuce. I had begun eating only chicken, rice and salad with oil and vinegar as my shift-meal because everything else was so unappetising. The chicken I often ate was called 'bourbon chicken', a reference to a New Orlean's style chicken. It sat at the buffet soaking in bourbon sauce, glistening with oil and fat under the soft glow of the buffet lights. I strongly suspect this sauce as the beginning of my indigestion problems. After about six months of working there, a feeling I'd never experienced before in my abdomen, like a squeeze that was intermittent and somewhat painful, began to afflict me. I had no idea what it was, I thought I might be seriously ill so I went to the doctor. He told me that I probably needed more fibre in my diet and instructed me to buy a certain fibre drink to take once per day. He also gave me sam-

ples of a prescription acid reflux medicine and told me to take it only sparingly. I bought the fibre drink and it did seem to work. But I wasn't disciplined about it and eventually the pain came back so I took some of the medicine. It worked really well in the first years of the problem, relieving the pain for months at a time. Later on when I lived in Tokyo, however, it did almost nothing to alleviate the symptoms of belching, or relieve discomfort in my chest or abdomen.

I bring my health, particularly my indigestion, into the story because it is of significance to my work on the biodynamic farm. Geographers Allison Hayes-Conroy and Jessica Hayes-Conroy (2008) use the term 'visceral' to indicate the 'internally-felt sensations, moods and states of being, which are born from sensory engagement with the material world' (p. 462). To speak of the 'visceral' here is to reflect on and remember how my body has reacted, felt and changed through my experiences of food and the effects on my body. Further, however, Hayes-Conroy and Hayes-Conroy (2008), in their work on Slow Food and eating, call for acknowledging the links between the visceral experience of eating and the wider social and political power relations that are inevitably part of our everyday lives. This, as we have seen, is also a crucial aspect of doing sensory ethnography. Therefore, it is prudent to consider connections between my visceral experiences of eating bourbon chicken everyday and the digestive discomfort that began as an employee at a national chain restaurant in the United States. My relations with the medical field of professionals charged with my care, moreover, also can become relevant when considered this light. The question might be asked, for example, how does (in my case) a Western medical doctor advise or treat such issues? Do they recommend a diet change? Do they prescribe supplements or drugs to treat the symptoms? The Indian scholar and environmental activist Vandana Shiva writes about 'poison cartel' (Shiva, 2017) to denote the group of chemical/pharmaceutical companies who, after WWII repurposed their chemicals as drugs and pesticides in the scaling up of industrial agriculture and medicine. What are the links, if any, between my visceral experience of indigestion, the industrially sourced food I ate at work, and the doctors action to prescribe non-food forms of symptom control? To be clear, I am not suggesting some conspiracy, I am rather attempting through a sensory approach to evince the wider relationships of the global power matrices in which I have found myself. Whether there is specific ill-intention or not behind Shiva's poison cartel, the fact remains that these global industries that spray poison on crops also encourage doctors to prescribe medicine they have created—as when I later worked in fine-dining and frequently served doctors a filet of beef with lobster tail laid over top, while a pharmaceutical representative presented their product (see below). In this way, then, the industrial food we eat and the drugs we are prescribed can be viscerally considered.

After almost one year of working at the buffet and complaining about it to everyone, my food-loving, botanist cousin-in-law—and the one who introduced me to Slow Food—recommended I try applying for a new position at an 'excellent' restaurant that prioritises regional and local foods. I took his advice, applied and got a job as server assistant—and food has never been the same for me. My job as a server assistant had the crucial effect of directing my attention to the 'foodways' of food: its sourcing and preparation, tastes and flavours and the connection of its tastes and flavours to its sourcing and preparation. It was here where I learned the notion of 'terroir'—the combination of historical human and environmental factors that contribute distinct characteristics to wines and foods, raw, processed or cooked—and began hearing more and more about the Slow Food movement. The particular restaurant in which I worked had won several awards for its originality and its mission (not always, but often fulfilled) to source ingredients locally from producers deemed to be 'sustainable'. This set it apart from most others in town at the time (though in recent years it has become more and more common). At this job I had the everyday experience of tasting the high-quality and professionally prepared raw ingredients and dishes that would normally have been beyond the reach of my income. I took part in twice-weekly wine tastings led by a professional sommelier who directed our attention to the aromas, flavours and textures of wines from around the world and beckoned us to 'smell everything—when you cut a lemon, a lime, a mushroom, inhale deeply!' I began to understand how this oft-regarded elitist pastime (something that the wine's price and context would certainly corroborate) was a lesson for taste far beyond wine. It was an education that tuned my palate to a diversity of flavours, developing an opening—and openness—to difference through food. These restaurant-based food and drink experiences, which spanned nearly seven years, were a significant education in the tastes, flavours, aromas, and textures of Sonoran terroir and the burgeoning local food movement as they related to environmental and economic concerns of sustainability, conservation and health[19].

One thing I was was always fascinated with was the types of people we served. The restaurant was divided into two different spaces: a very high-end one that commanded the wine list, while the other had a bar and somewhat lower prices and more 'fusion' fare. I worked in both. In the side of the building which was for 'fine-dining' there were the most memorable customers: it had been a custom

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[19] Through the work of various parties, including two chefs whose restaurant I worked in, Tucson has since become the first city in North America to be designated as a World City of Gastronomy by UNESCO. The video here provides a sensually evocative representation (Pink, 2015, 171-3) of the gastronomic context in which I was educated and has contributed to my emplacement in the ethnographic place-event of this thesis: Emplacing: Tucson

for celebrities to write their name on the bottom of the chairs in which they sat: I remember seeing 'Will Smith, 1992.' written under one chair. But more than celebrities it was 'guests of industry' who stick out to me most. We once hosted the Tyson family in the private wine cellar. Tyson is one of the largest industrial chicken companies in the U.S. and their large number of products like 'Honey BBQ Chicken Strips' can be seen in the frozen section of every American supermarket. It seemed so counterintuitive to me that the Tyson family was eating at our restaurant. I also remember distinctly the 'pharmaceutical' dinners because of their ubiquity. This was when a representative from a pharmaceutical company would book one of the two private dining rooms to host (read: pay for) doctors' expensive meals while the representative presented their product. Looking at the U.S. medical system now and the opioid crisis, it feels even more like the connections between the food I eat, the drugs prescribed to me, and the poisons sprayed in agriculture have some kind of pernicious link, however unintentional. While working there, my indigestion subsided for some time, however, it did come back and this time with a different character: rather than a squeeze in my abdomen it was the burn in my chest. I soon discovered that this was related to the freshly deep-fried corn tortilla chips and salsa—long my weak-spot for overindulgence—which happened to be the best way to snack while working. Fortunately, this was something I knew I could control and managed to, eventually cutting down on eating the satisfyingly crunchy, salty, oily and spicy snack.

The seven years I spent working in such contexts were eclipsed, but only in some ways, by the six year education I subsequently received as a teacher in Tokyo, Japan, where I considered myself to be 'practicing anthropology everyday,' as an old professor used to say. The literal and figurative world of difference in food and flavours, not to mention the attitudes toward food, were sensational. My prior instilling of the try-anything-once policy took over my every day experience. This policy, however, excluded Japanese fast-food hamburger restaurants, the taste of which I was already fairly certain, after all. I remember this refusal annoying a fellow teacher-in-training so much that he was quick to spread the word that I was a 'food snob'. Perhaps I was but I didn't mind as long as it was snobbery toward cheap industrialised food. Nevertheless, upon moving to Tokyo I was looking for something new and exciting to challenge me—I quickly found it on my very first day of training at my new job in central Tokyo. On a short break from training we took the elevator downstairs to the nearby convenient store. The issue of selecting something written in a language I could not yet read contained a certain thrill. Some of the rice ball packages had tiny pictures on them, but I still had no idea what they depicted. I chose a rice roll that appeared to have some kind of bean inside of it. As beans are deeply a part of my food history, I reasoned that it must be something I'd like. Upon leav-

ing the store I tore open the plastic wrapper and took a sizable bite from the roll. As I pulled it away from my mouth I noticed a gooey, sticky string being formed by whatever (beans?) was inside the roll. That is about the time I noticed the stink, familiar because it was similar to my sweaty basketball socks after a long game, but brand new in terms of having the smell emanate from my mouth. Stopped in the middle of the sidewalk I struggled to break off the sticky substance between my mouth and the roll, twisting and turning it while the smell and now the flavour twisted my face into a disgusted snarl. This bean, I found out later, called 'natto' is a fermented soy bean that develops a slimy coating and funky smell due to their particular bacteria—which is so strong it can even survive in space, so I've been told. The smell is loved, and occasionally hated (but mostly loved) throughout Japan. I hated it that first time I tried it. The second time I tried it was almost a year later when some friends from the U.S. came to visit. I made them try it too, but this time at a restaurant and the natto was stuffed inside deep-fried tofu and served with spicy Japanese mustard. What I had planned to be a shocking taste for my friends turned out to be pretty good. But I was convinced that the deep-fried tofu was to thank for that. Natto just by itself, I was sure, was still disgusting. The third time I tried it, the beans looked different. They were quite a bit larger than I had seen and I was curious. Plus, I really wanted to impress my new girlfriend (now wife), and I was a little drunk. She gave me a spoon—no, chopstick-full and somehow it tasted great. And the beans, I love beans! Flash-forward four years and I was eating it every day for breakfast. At first I would only eat natto with the large beans, but gradually I came to enjoy it all, no matter what size the beans were. I ate it in the style my wife showed me how: mixed in a rice bowl with a fried, or sometimes raw, egg and a dash of soy sauce. I later developed my own way, a nod to my rice and beans childhood: substituting the soy sauce for a spoon of fresh salsa made from the dried chiles my mother had sent from her local farmer. My partner liked this version, too. And so it was that I came to love a food that, to those unaccustomed, is pure nastiness. Being open not only to trying anything once but to continuously trying everything several times, even if initially disgusted, taught me a valuable lesson: change is good.

What I underwent in the previous section amounts to an explicit sensory education of a kind I had never previously had. For me it raises a series of questions. What is in the smell of something? The Taste? The Texture? The flavour? If one's attention has never been consistently, explicitly directed toward pondering the aromas, tastes, flavours or textures of food, how well can one express feelings, thoughts, or memories about it? How much food-related vocabulary, for example, does one have at their disposal? When someone ingests foods, they interact with tastes, flavours, textures, looks and

sounds. In what ways does one tend to appraise such interactions? My guess is that they might be appraised, if at all, simply: in terms of like or dislike, good or bad, sweet or salty, with a memory attached that makes a food a 'comfort,' something you 'know' you hate, or a smell that reminds you of home, your mother's bread or casserole, or of grandfather's garden (Seremetakis, 1996; Sutton, 2001). These are all common feelings and thoughts when consuming a food and considering its taste or smell or texture or flavour, surely. But perhaps it is possible to interrogate these ideas further.

In every place I have lived, at some point or another, the topic of food is invariably conjoined with personal health: on TV, magazine, radio or internet commercials, at the doctor's office, on restaurant menus, at school in health class. There can be no doubt, then, that when learning about one's personal health, the category of taste (by way of food) is likely to be present in some way, shape, or form. It is evident, for example, that people in modern societies generally understand that something sweet is not very healthy, and so people might agonise about not eating too many cookies and so on. When it comes to bitterness, people may more commonly associate the taste with something that is healthy: a bitter 'green' or an herb, a vegetable, medecine, and therefore, it is healthy. There are a few points of interest here.

The first point is that the association of health with taste has no basis in human nature—it is not something that everyone instinctively 'gets'[20]. It is inculcated, as we saw in Chapter 2, through living in particular environments and places with other people with particular values—something we might call 'culture'. It is the cultural elaboration of bitterness and sweetness that comes to matter here, forming associations between things like health and taste. Indeed, something bitter could kill you and something sweet can might give you slight boost of energy or make you happy—but there is nothing inherently 'healthy' about bitterness or 'unhealthy' about sweetness—though clearly excess amounts of sweet things are indeed unhealthy. We saw such an example in Sydney Mintz's (1986) study of sugar and the British Empire, in which sugar, or the abundance of sweetness, went from being associated with wealth (p. 89), to (good) health (p. 86), to something you take with tea (p. 115), to something you have after dinner as 'dessert', before finally coming to be 'unhealthy', as it is so commonly considered today. The important thing here, again, is the cultural elaboration or emphasis (that is, the structures that exist to create such conditions of, for example, mass consumption of sugar) on the sweet item. In this light we may say that, starting with Britain, the mass consump-

[20] Though it still retains an evolutionary presence, associating the taste of something bitter with poison, and therefore death, is not the same as associating the taste of something bitter with something that is healthy. While the former may be seen as a 'base' function of human nature, the latter is unquestionably dictated through thoroughly modern processes.

tion of sweetness (via sugar) has given rise to the sensory association of sweetness with ill-health. As is now well known, sugar is indeed a central ingredient in global modern health woes—a very physical, biological fact which, however, cannot be extracted from the social and environmental ones that are also at play.

As we have seen with Gupta and Ferguson (1997b) as well as Pink (2015), it is not tenable in sensory ethnography (or most other ethnographies) to consider culture as something that is bound to or within any one geographical place. Therefore, it has been my observation that taste and health are associated with each other not only within the 'West', but also, for example, in Japan. It is a thoroughly modern (unbound by national or ethnic culture) sensory association to have, and its abundance, from a sensory ethnographic approach, necessarily links the ubiquitous taste-scape of sweetness with the global processes of the industrial food industry[21]. If we then consider what Slow Food has to say about the global food industry, we can understand that the ubiquitous sweetness experienced by peoples in the modern world is necessarily linked to global agricultural systems that are destroying biodiversity at the expense of 'cash crops.'

The second point takes off from the first to consider that, if through our being-in-the-world we learn that certain tastes or flavours are associated with certain kinds of health conditions, is it also possible to learn that the presence or ubiquity of some tastes and flavours, in certain seasons perhaps, are associated with wider global processes that jeopardise biodiversity, poison bees, pollute soil, or else regenerate it? My contention is that it *is* possible to come to learn, grow and know such associations through taste—but this requires an education explicitly in taste. Indeed, my experience learning how to taste in the restaurant helps to inform this view because, rather than talking about taste in terms of bitter or sweet, the education was about expanding or clarifying our attention to tastes, textures and flavours—the softness, nuttiness, minerality, plastic-like, tobacco-touched or citrus characteristics of a wine or food. This type of tasting is not objective but is rather based upon one's own experiences with the world and the meanings that accumulate in relation to our sensory experiences, which when coaxed and educated through contexts of attention, becomes a distinct type of knowledge not unlike knowledge gained through other sensory modalities. Far from being a handicap in its subjectivity (as Kant was wont to argue), the subjectivity of taste is the key to creating associations that promote sustainable processes related to food, if only they can be brought to attention.

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[21] And like other uses of the senses through history, the association between taste and health is highly gendered: media and discourse about food and health, while certainly known by men, tends to be largely targeted at women.

We can also address this from a chemical point of view. While our tongues can only detect the basic tastes of sweet, sour, salty, bitter (and possibly umami or metallic), it is our nose, the olfactory organ, which accounts for flavour. This is why it is difficult to taste things when we have a cold, or when we plug our nose, for example. It is estimated that the number of molecules that can be sensed by our olfactory system is 10,000 at minimum (Bartoshuk and Duffy, 2017, p. 21). Certainly I do not have 10,000 vocabulary words or recipes for talking about or creating the flavours in food or drink, as I imagine most other people do not either. But the point remains that an explicit (that is, attention-giving) education that invokes reflection, dwelling, discussion and other expressive forms regarding taste, contains exciting possibilities for ESE curricula and even formal education more broadly. From the restaurant, then, I learned to reconsider what it means to eat and taste food. Later, however, I learned how to adopt and adapt new and old understandings of food, taste and flavour altogether.

Sure, change is good. But not always. One significant lifestyle change was in my sleeping and eating schedule. When I had worked in restaurants we often finished late—11pm or midnight, often even later. However, I typically ate my dinner at the restaurant around 8 or 9pm, which is not too early but also is not too late. When I moved to Tokyo, my teaching hours were typically from 3:30pm to 9:30pm, followed by a commute home that could be anywhere from ten minutes to an hour or more. This meant that I usually ate dinner when I got home, around 10:30 or 11pm, and try as I might, often fell asleep soon thereafter. This habit of eating and immediately falling asleep re-awoke my indigestion but with a new, loud twist: belching. For several years living in Tokyo I harboured daily gaseous eructations that only subsided when I began to seriously address it by refusing to eat food after 8pm in the evening. Though the issue has subsided to a degree, it is certainly not gone and it comes back under several conditions that I now can clearly recognise: eating too much; eating then laying down; eating too many fried foods in one sitting; eating too many acidic foods in one sitting; eating edible food-like substances; and most recently, drinking cheap beer. The list, indeed, has never stopped growing.

Early in my relationship with my wife I was heavily inclined to prepare a 'taste of home' for her. This meant the flavours of my mother's and aunt's kitchens, Mercado, my experiences working in the restaurant industry, and frequenting the outrageous numbers of excellent taco shops, burrito stands, tortillerias and carnecerias (tortilla and meat factories) in Tucson. I remember that I found dry pinto beans at a store in Tokyo and I knew that I had to make my favourite: refried beans. I soaked them

and cooked them up the next day, smashing as I went and adding some oil. They were pretty good, but they weren't quite right. What was missing? I didn't find the answer until I started making flour tortillas. Up to that point I typically asked visiting friends to bring me dozens of flour and corn tortillas when they came to visit me. I would store these in my freezer, hoping to make them last until the next friend flew across the great Pacific. This supply always eventually ran low, however, and I was forced to make my own way. I began experimenting with different ratios, temperatures and techniques, trying to find the flavours and textures that I knew. Eventually, I realised that I needed lard, but where could I find it? It is not a common ingredient in Japan. We decided to make some and I ordered several kilos of 'back fat' from an organic pig farm in the North. I was told that using pigs grown on steroids or growth hormones ruins the fat because all the chemical make their way into it. I cut up the fat and cooked it low and slow for a whole day, scooping out the melting liquid. It solidified into creamy, snow white lard and it was beautiful. I made beans again—jackpot. ***That*** *was the taste I know, that was the taste I grew up with—it came from the lard! I made flour tortillas—jackpot. Lard was the secret to creating that thin transparency and softness that I knew but could not find in the store.*

The problem of corn tortillas still remained, however. Corn tortillas are made from masa flour, which is usually dried white or blue corn, boiled with some citric acid from lime, then mashed into a pulp before being shaped and cooked. Not lard or any oil in these tortillas. The store in Tokyo had masa but it was fairly low quality flour shipped from across the sea. What was I going to do? Well, I figured that if the masa was substandard, why not add some lard? I did and I found something that struck me. After experimenting with ratios and a few dinner parties a friend asked me if I wanted to sell tacos at his bar. This offer eventually turned into a tiny enterprise: a mobile kitchen stuffed in to a bicycle trailer that I would ride to the bar, set up my things and hand press fresh corn tortillas for a curious Tokyo crowd (Figure 4).

Since moving to Finland my partner and I have both found considerably more time at home than Tokyo allowed us, and I have begun to learn to bake breads and pizzas from my own sourdough 'root' starter. My partner's love of food has intensified and we always seem to eat amazing meals at home—she typically makes dinner that has flavours characteristic of East and Southeast Asia, while I typically make breakfasts and lunches of pancakes, omelettes or sandwiches, flavours more typical of Western foods. The food we eat at home is always fresh, always made from scratch unless it is noodles or some other simply processed dry or canned good. Though recently we have begun to

Figure 4. The author makes fresh corn tortillas for customers at lunchtime. Shibuya, Tokyo. April 2, 2017.

make our own pasta and ramen noodles! It has been interesting how our cooking routine and the types of things we make for each other have taken shape since leaving Tokyo.

Of all the changes in my life between moving to Finland and beginning my study, one of the most notable, unsurprisingly, was the food. In Finland the university provides a subsidised lunch for students and I was happy to find an array of fresh salad options along with the other prepared meals. By this point in my life I have become so aware of my indigestion issues I felt confident I knew what I could eat and what I couldn't. However, after a couple of months I started feeling a squeeze in my

abdomen, in the same areas of my abdomen I had initially felt the squeeze while working at the buffet restaurant in university. What was this? How could this be happening? I eat fresh food, lots of vegetables every day, I don't eat much meat, I don't drink much alcohol…I was confused. It began to worry me as it was happening more often and becoming a bit painful. At Christmas time we visited family friends in Munich, meeting my parents who came from the United States and my sister who came from Istanbul where she was living. I remember Christmas Day, eating a delicious Bavarian pretzel and white sausage that I could not fully enjoy because of the pain—pain I had thought was indigestion but had come to feel sinister since I could not pinpoint its cause.

Later I told my mother and she gave me a Alka-Seltzer, which is simply a calcium bicarbonate tablet that you dissolve in water—a common remedy for indigestion-related issues. The pain stopped in its tracks. I hadn't tried it because I was beginning to think the pain was unrelated. I wondered how I had been so dumb to not take this before. However, I was still perplexed as to why I had started getting the squeeze again in the first place, and that particular squeeze that accompanied my introduction to indigestion. Certainly my body and environment had changed much since that time. I knew my body quite well by now, didn't I? Perhaps not as well as I thought. The squeeze made a comeback at the end of January but this time I was prepared with the medicine my mom gave me, though feeling frustrated that I couldn't figure out what the cause was. As time went by I had to take the medicine more frequently to avoid the squeeze, I used about seven tablets before I left Oulu for my internship.

The above constitutes a sensuous auto-biographical account that attempts to 'reawaken profoundly the…body by demonstrating how fusion of the intelligible and the sensible can be applied to scholarly practices and representations' (Stoller, 1997, p. xv). The weaving of the sensuous with the theoretical moreover functions as a tool here to locate my emplacement as sensory ethnographer in the forthcoming analysis of my fieldwork, which I interpret through the theoretical lenses I have already presented (Pink, 2015, p. 107). Also of importance is that in the above account (and below) I attempt to treat the totality of my experiences as an 'education'. Here I take education to be characterised simply as 'a practice of attention [through which] knowledge is both generated and carried on' (Ingold, 2018a, p. 2) in correspondence with others. What I do not take education to be, following Ingold, is 'the transmission of information' (p. 2) from a teacher to a student, encoded in signs and symbols. Ingold decries the classical assumptions of pedagogy (and psychology and biology, genetically speaking) as being rooted in an idea of transmission in which knowledge (or genetic informa-

tion) is inscribed by a rational pedagogue into a pupil who then goes forth to apply it in the world. Such an assumption actually renders correspondence—the ongoingness of responses with one's total environment in a field of relations—null because it is already pre-figured (Ingold, 2000, 2011a, 2018a). Ingold (2018a) contends:

> The first place to find education is not in pedagogy but in participatory practice: not in the ways persons and things are symbolically represented in their absence, but in the ways they are made present, and above all answerable to one another in the correspondences of social life. (p. 17).

The definition is noteworthy because it corresponds with what I have written above. For example, I described the route I have taken in regard to liking the Japanese food natto. Acquiring the taste for natto was a matter of attention and correspondence that unfolded within a wider 'ecology of relations'(p. 46)—with my friends, with the natto bacteria *Bacillus subtilis*, with my partner, with Japanese food customs, etc. The same goes for the growth of my love for Mexican food and how I utilised it in Tokyo, or learning about the kinds of things that upset my indigestion—they are all produced and grow in relation with my emplacement in the past and my ever-present anticipation of the future, of which I (and we) 'ongoingly slip over the edge' into its immediacy (Pink, 2015, p. 193). Further, education conceived as Ingold does, as ongoing correspondences in a field of relations, sweeps Cartesianism from its set pieces of isolated and ready-made-for-the-world states of being—which Ingold (2000) argues still figure into the most fundamental assumptions of psychology and biology (pp. 170-171) and, following Dewey, in forms of 'training' that still pass for education today (2018a, p. 5)

Below, I will begin an account of my sensory ethnographic fieldwork. It is grounded within the same Deweyan/Ingoldian notion of education—and indeed, anthropology—as I have argued elsewhere, and takes Western five-sense categories as analytical tools. As in the auto-biographical account above, I will blend the theoretical and sensual textually and through photos. However, in what follows, I have included videos created as part of the sensory ethnographic fieldwork. Per the University of Oulu's limitations regarding thesis submission, it is not possible to attach videos into this thesis document itself. I have instead referenced videos as figures and inserted a hyperlink that takes you to the requisite video in my online YouTube account.

I will begin by describing the sensory methods I utilised before, during and after the fieldwork. I then contextualise the biodynamic farm and Ecovillage) before addressing the finer details of the field experience in which I introduce participants and address the senses, learning, sustainability and how they all fit together in the fieldwork. In the final chapter I come back to address the research tasks and discuss the limitations and ethics of the thesis project.

4 SENSORY ETHNOGRAPHY

> *We have not yet gathered up the experience of mankind in the tilling of the earth; yet the tilling of the earth is the bottom condition of civilisation. If we are to assemble all the forces and agencies that make for the final conquest of the planet, we must assuredly know how it is that all the peoples in all the places have met the problem of producing their sustenance out of the soil. —Dr. L.H. Bailey, Preface* in *Farmers of Forty Centuries; or, Permanent Agriculture in China, Korea and Japan.*

The quote above is notable on two accounts: its recognition that agriculture is the premise on which human civilisation is based; as well as the embedded assumption that humans can and will conquer the planet. The first account is quite true—and is at the driving heart of this research; whereas the second account seems rather a legacy of the 'Enlightened' man thinking himself above and beyond the natural world—a subject of my critique. Nonetheless, the quote opens an important chapter for not only this thesis, but also for a moment in the opening years of the twentieth century that marks the beginning of subsequent movements in biodynamic and organic farming.

The quote appears in the opening pages of a seminal monograph, published in 1911, by Professor and (briefly) United States Department of Agriculture (USDA) Chief of Soils, Franklin Hiram King (King, 1911/2004; Paull, 2011a, p. 176)[22]. The book, which documented the regenerative farming practices that King observed in East Asia (Japan, Korea and China) during an eight-month expedition in 1909[23], was regarded as a 'classic' by the founders and leaders of the biodynamic and organic movements in Britain, Switzerland, Australia and the United States in the first half of the twentieth century (Paull, 2011a, p. 175)[24]. After King, the next major step toward ecologically engaged farming came in the form of the biodynamic and organic movements which arose from a series of secret (at the time) agricultural lectures given by Rudolph Steiner in 1924. The lectures enjoined attending farmers to begin experimenting and testing Steiner's agricultural ideas, all based around the central concept that 'the farm is an organism' (Paull, 2011b, p. 23). After more than a decade of accumulated empirical data gathered and recorded by farmers in attendance at th 1924 meetings, two different

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[22] King was forced to step down from his position at the USDA after repeated clashes with the USDA president, Milton Whitney, who King and others accused of censoring soil science at the USDA.

[23] The farming practices were of interest to King because they held the key, in his view, to explaining the large, dense populations of the three countries, estimated by King to approach 500 million people just after the turn of the century (King, 2004/1911).

[24] In his book introducing organic agriculture in 1940, *Look to the Land,* Lord Northbourne gushes: 'That great book by Professor King *et al.* Farmers of Forty Centuries, a book which no student of farming or social science can afford to ignore' (cited in Paull, 2011a).

books outlining biodynamic and organic methods of agriculture where published: in 1938 by Ehrenfried Pfeiffer in Switzerland, and 1940 by Lord Northbourne in Britain, respectively (2011b, Paull, p. 13). The key differences between the two books lay in the secularisation of the latter (away from Steinerian anthroposophy), as well as the fact that Lord Northbourne employed the name 'organic' as a term to counter the increasing use of chemical fertilisers (e.g., Haber-Bosch nitrogen fixing) and insecticides in agriculture (Paull, 2014, p. 32).

From this brief historical trajectory it is evident that the first half of the twentieth century saw tensions arising between chemical versus non-chemical agricultural methods, or alternatively, the control of nature from an imagined place outside of it versus operating with and within it. These tensions, of course, extend further back to Enlightenment times and are enfolded within the moves toward scientific quantification and capitalism. A pertinent example of this can be found in Lissa Robert's (2005) account of the dishonourable—even fraudulent—death of eighteenth-century sensuous chemistry at the gloved hands of the enlightened, measured objectivity of quantitative methodologies. Roberts describes the discipline of chemistry, especially as taught by the popular lecturer at Jardin du roi in Paris, Gabrielle-Francois Rouelle, as one dedicated to training and refining the chemists 'disciplined use of their bodies in a simultaneous drive to reveal natural knowledge and productively manipulate chemical substances for utilitarian benefit' (p.110). Indeed, Rouelle was responsible for training a generation of chemists to use all their senses in their chemical pursuits. This sensuous practice did not discount or disdain measurement or calculation, rather it did give far more prominence to sensory-based evidence than in modern times, and hoped that measurement and sensuous work might grow together. Sensuous chemistry required patience and persistence in the face of investigating, for example, the medicinal properties of the nauseating stinks (or tastes) of 'spoiled urine' or the 'odourous liquid distilled from living snakes' (pp. 115-116). For the chemist-in-training, educating the senses meant the possibility of picking out a distinct scent, a threshold temperature, or a particular colour hue that would indicate particular chemical properties. Rouelle required the 'artists' under his tutelage to have 'his thermometer at the tip of his fingers and his clock in his head' (Secretan, 1943, p. 111, as cited in Roberts, 2005). Indeed, not all chemists-in-training were keen to subject themselves to such sensory experience. Meanwhile, a regime of standardised measurement armed with laboratory instruments meant to extend the senses (but mostly the eye), rather deceitfully and surreptitiously took command as the French Revolutionary spirit began to swell toward the end of the century (pp. 117-120).

Flash forward to the present day and we find a chemistry mostly divorced from sensory investigation. At a fundamental level our modern sense-less chemistry allows for the production of poisons

beyond the eighteenth century's wildest dreams. If World War I was the first major showcase of the consequences of such a divorce, the rapid loss of biodiversity and soil erosion due to intensive agricultural chemical inputs is the second. Biodynamic farming, then, holds an intriguing locus for sensory research because it finds itself fundamentally rooted within and as part of the environment at large, qualitatively and sensorially connected to the production of food and to understanding the ecologies that produce it, necessarily devoid of toxic materials. This chapter begins the sensory ethnography of the biodynamic farm. Before stepping onto the farm, however, I will set the scene

4.1 Methods and field relations

In 2018-2019 I asked for and received permission to conduct sensory ethnographic fieldwork on a biodynamic farm belonging to the Ecovillage, La Casa Rotta, in Piedmont, Italy. The acting manager of the Ecovillage and an employee of Slow Food, Michela, granted me permission to carry out research on the farm and to use the real names of the Ecovillage, its organisational relations (e.g., Slow Food), and the real names of Ecovillage members, but required me to notify volunteers coming to the farm and asking their permission to use their names or likeness in media. I have refrained from naming anyone who has not given me permission to do so, as well as I have avoided using full names and names or likenesses of children as my own choice. I saw no compelling reason to use the full names of participants or the names of any children with whom I interacted in the research.

Two of six members of the Ecovillage are employees at the Slow Food Headquarters in the nearby town of Bra. The research lasted for eight weeks between June and August 2018 and simultaneously fulfilled an internship requirement for the Education and Globalisation Master's program (EdGlo) at the University of Oulu. I made two subsequent visits in September 2018 for two days and in February 2019 for five days. This fieldwork was supplemented by attendance at two international Slow Food conferences in Copenhagen, Denmark (Terra Madre Nordic) and Turin, Italy (Salone Del Gusto/Terra Madre). Through each of the field experiences I was joined by my wife, Minae. This arrangement necessarily implicated her as a research participant, and even a co-researcher, in the sensory ethnographic research. I shall address this in more detail below. In the present section I will attempt to describe, depict and evoke in other ways the practical, experiential and theoretical explorations of the sensory ethnographic research I have carried out. Please note the use of sensuous tools: photographs, links for videos and *italics* used to denote particular tones or perspectives.

4.1.1. Priming methods

The fieldwork methods of doing sensory ethnography encompass a range of tactics that occur before, during and after work in the field. The methods suggested by Pink (2015) prior to the field include examining the 'sensory subjectivities' of one's self and the groups who are participating in the research, as well as a preliminary review of literature, film, and other media, focusing on the sensorial aspects of these (pp. 54-70). Trying to understand one's own sensory subjectivity means giving explicit attention to the cultural and personal sensorium of the researcher. The sensuous auto-biographical account above is one outcome of this suggestion. Another aspect of preparation included bringing my wife, who is Japanese, into the sphere of the research I wanted to undertake. I became more purposefully curious about her own cultural and personal sensorium by asking questions about how she or other Japanese conceptualise the senses in different ways. This was particularly useful in helping to locate my own sensory subjectivity in relation to the research participants on the Slow Food-connected biodynamic farm. For Minae, engaging in these sensory correspondences helped to generate deeper reflections about the senses in her own life. As my co-researcher, then, she also came to the field having been primed to give extra attention to the significance of everyday multisensory experience, pointing out to me anything she found of relevance. More generally, I tried to pay closer attention to the way people around me used and talked about the senses. For example, I recall a conversation with a group of friends who posed the question, 'If you could have an extra eye anywhere on your body, where would it be?' My response was to ponder why it was the eye (and not another sense organ) that was the subject of the game, and therefore (ostensibly) implicitly the most valuable sense organ. Such thought exercises led to discussions on the senses with my classmates. I know I succeeded in this regard because of the way they had come to tease me ('Oh gosh, here we go with the senses, again!') by the end of our first year in the EdGlo program.

In order to inspire such thoughts and conversations I of course needed to review relevant media, especially as it related to the participants of my research and with a particular attention to the senses. In this regard, before moving into the field I read widely on the Slow Food movement (Petrini, 2001, 2007; Slow Food, 2015), evening attending the two-day conference in Copenhagen. I also read about food in culture, history and memory (Korsmeyer, 2017; Mintz, 1986; Seremetakis, 1996; Sutton, 2001;) as well as in the field of sensory studies (Classen, 1993, 1997, 1999; Howes, 1991c, 2003, 2005, 2018). Lastly, Pink (2015) acknowledges that the undertaking of sensory ethnography is an ethical and moral project, as I discussed earlier. As this ethical and moral positioning is targeted at working to make the world a better place it necessarily implies a future-orientation 'that engages with the imagination and the ways that the future is part of the present' (p. 69). Integrating a collabo-

rative sensory ethnographic approach ‘with the ethics of change making for a 'better' world’, places sensory ethnographic practice in a unique position ‘to address the future and its uncertainties in ways that go beyond verbal expression and the domain of representations’ (p. 69). This is the position that I have adopted—similar as well to positions taken by Slow Food and anthropologist Tim Ingold—for this thesis.

4.1.2.. Field methods

Fieldwork for sensory ethnography utilises aspects of classic participant observation such as field notes, formal and semi-formal interviews and casual conversations and interactions, but expands these more traditional practices in several ways, particularly through representational and non-representational theories of emplaced multisensory knowing and learning. For one, this requires an understanding that experience is ‘*neither* dominated by *nor* reducible to visual mode[s] of understanding’ (Pink, 2015, p. 96, original italics). As such, the sensory ethnographer attempts to learn through their emplaced, multisensory inquiry with others through ‘participant sensing’ (p. 101), in which the ethnographer joins participants in the planned or unplanned experience of ‘being there’ (pp. 98-107). In my case, this took many forms including sowing, tending to and harvesting crops; doing house repair or building work; planning, preparing, cooking and eating; playing card games, going to weekend markets, attending tasting events and seminars; speaking with food producers, farmers and gastronomes and more. Through these activities with others I was implicated in a type of ethnographic learning—an education—that, while not able to be a ‘direct reflection of reality’, was nonetheless built through ongoing instances of ‘creatively construct[ed] correspondences’ between myself, others and the sensory and material environment of the biodynamic farm and Slow Food conferences (Okely, 1994, pp. 35-36). In this way, ethnographic knowledge is created and understood through a sensory lens and therefore offers alternative ways of understanding and representing research, learning and, in the case of this thesis, education more generally.

Beyond my own immediate phenomenological experiences in the field I attended to the sensoriality of place-events in which I found myself. I kept a small hip pack on me at all times that contained pens, two small notebooks, an audio recorder and a smart phone. This allowed me to quickly jot field notes when a thought occurred, record a soundscape of birds and insects in the peach field, or snap a photograph or take video of the processes and interactions in which I was engaged. In addition to my own hip pack, my co-researcher Minae also utilised her smart phone for photos and video. An admittedly more vigorous photo and video-taker than myself, Minae’s audio/video documentations later became part of the material I used for this research, adding a new layer of sensory

perspective to the overall material. This was not something that I had planned for ahead of time, but was nevertheless a fruitful and serendipitous circumstance. Collectively, we created over 2,278 photographs and videos and my full-field note write-ups came to nearly 20,000 words.

I conducted three semi-formal interviews with five people: one volunteer at the farm, the two founders of the Ecovillage and two Slow Food employees engaged in international coordination of the organisation. I partially transcribed all three interviews through a mix of handwriting and computer-based typing. I have only explicitly used material from the interviews with the Ecovillage founders, but the other interviews have undoubtedly influenced the way I have thought about this thesis. Besides these interviews I engaged in countless spontaneous conversations and experiences in which I made short notes and attempted to quote comments I found relevant and intriguing. In some instances I was able to write down other's words verbatim, and in these cases I have put their words in quotation marks. Otherwise I have paraphrased their words according to my notes and my memory based on my writings, photos and videos.

I also participated in two international Slow Food events. The first one, in Copenhagen, took place over two days and an additional day was spent attending an all day lecture/seminar hosted by the University of Gastronomic Sciences—Slow Food's university in Bra, Italy. While there, I met vendors of specialty foods and products from around the Nordic countries, participated in a blind salmon tasting in which eight different pieces of smoked salmon were served, each one having been sourced and processed differently: farmed and traditionally smoked, sustainability farmed and electrically smoked, wild and hybrid traditional/electric, etc. The Slow Food event in Turin was much larger, was represented by over 140 countries and took place over five days in the former olympic stadium complexes in Turin. I tried, and saw others try, countless *terroir* foods from around Italy and around the world—including smelling samples of grass eaten by the cows in a specific region of the parmesan cheese producing region of Emila-Romagna. I also attended several workshops over the five days (Figure 5). My experiences these Slow Food events were deeply formative of this project as a whole. Due to space limitations, however, I will only refer to them infrequently, focusing instead on the material collected in the biodynamic farm.

4.1.3. Post-field methods

In the analysis of collected materials of sensory ethnographic fieldwork, Pink (2015) is explicit that there is no one form or template that must be used to do a sensory analysis. Instead, she begins by situating what analysis is, as something that exists 'within the fieldwork process' itself, as well as

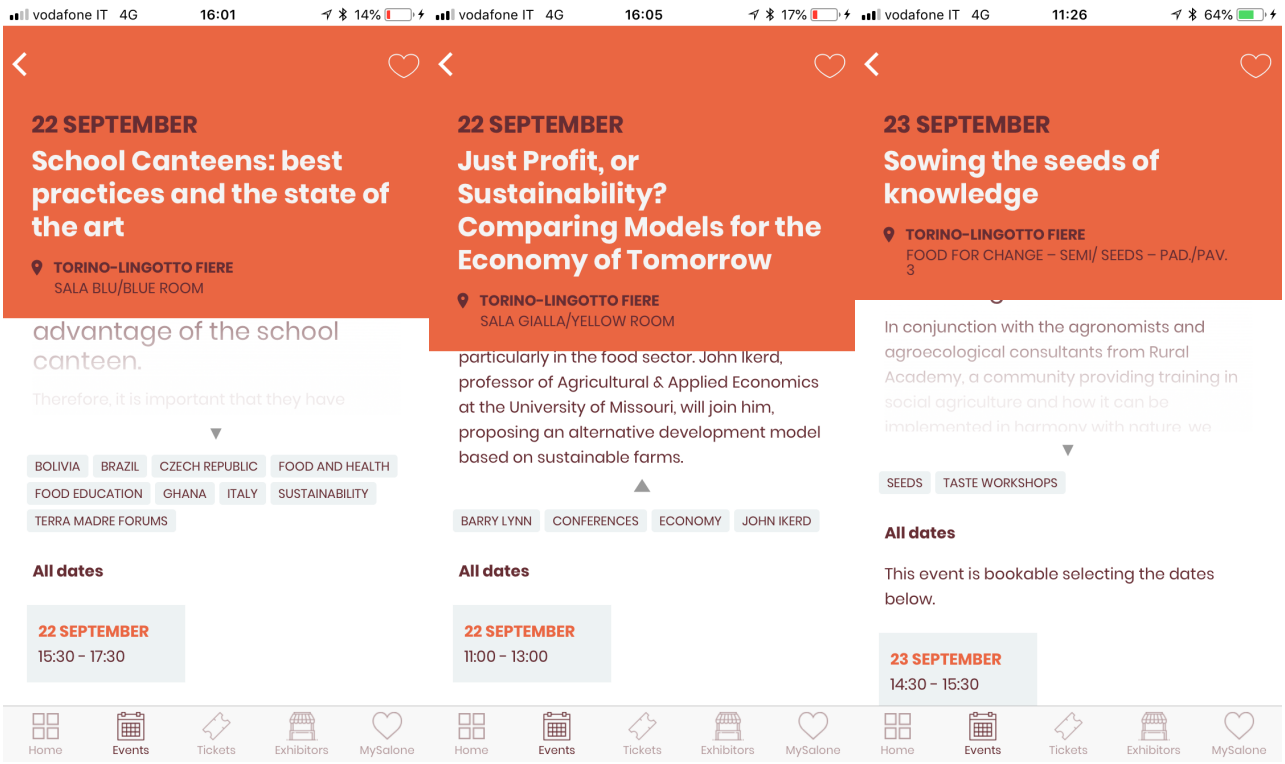

Figure 5. Screenshots of three different events I attended at Salone Del Gusto/Terra Madre 2018. Turin, Piedmont. September 21, 2018.

being 'situated spatially or temporally away from the sites and moments of ethnographic fieldwork…*in relation to* the phenomenological context of the production of the materials' (p. 143). Next, the concept of a sensory imagination is useful here (and as well as at other stages of the project). To imagine here is not simply a 'cognitive practice' as Pink (who builds on Arjun Appadurai and Tim Ingold's notions of imagining) argues, but one that is embodied and multisensory (2015, p. 46). This is particularly true when coupled with a theory of place, which helps to situate analysis further because the actual doing of analysis (and writing of this thesis, or preparing and presenting to an audience, for example) necessarily involves a process that weaves 'memory, imagination, embodied experience, socialities, theory, power relations and more' (p. 142) in creating what I have already described above—the ethnographic place. From this view, doing sensory ethnography *and* ethnographic analysis can be conceived as 'mutually open' (p. 142).

The practical aspects of this analysis were concerned with reviewing the textual, audio, video and material artefacts 'in terms of what they *represent*' (Pink, 2015, p. 144). The materials that I have gathered, when viewed through a sensory lens, can be routes to remembering and imagining the emplaced research encounters which produced them (p. 144). For example, as I reviewed the photograph of a delicious looking peach (Figure 6), I simultaneously read my field notes that I had taken

that day which described my tasting of the peach to gauge its ripeness in a moment of sensory emplaced learning:

> *The peach feels soft enough but the lack of redness near the stem indicates it wasn't yet ripe. I smelled it and it smells fresh, like it is juicy inside. I took a bite and it was juicy and sweet but became more firm, and even crunchy, the further my teeth sunk toward the core, becoming unpleasant, or un-peach-like, anyway. The firmness in the core fit well with another sensory aspect of the peach: its skin, which was a bit thick and still had lots of fuzz on it. It gave me the chills and made the hairs on my neck stand up when I bit into it. On each subsequent bite I tried to sink my teeth into the peach as quickly as possible to avoid that chilly feeling! Peaches like this probably need one or two more days on the tree if it's sunny.*

Figure 6. An almost-ripe peach, just before being eaten. Vergne, Piedmont. July 24, 2018

As I read this, sitting at my desk, I felt the same sensation come back: chills and my neck hair standing up! This write-up, moreover, indicates how I had come to understand ideal weather conditions for peaches (*'if it's sunny')* and learn about the ripeness of peaches on the farm: through the sensory qualities of the peach to be attained by visual, tactile, auditory, gustatory and even olfactory means (i.e., the sharp crunchy sound of the core versus the smooth, watery crush of ripeness that I have come to expect from a ripe peach). I recall being in the peach field and wondering how Stefano, the agricultural director, determined the ripeness of peaches when he appeared and began asking us about the peaches while he picked one from the tree, bit into it and said 'Yeah, this one is very good.' He then told us about the redness at the top as visual cue, but what was apparent was that through actually eating the peach *in combination* with other sensory cues, he was able to better come to know peach ripeness. In turn, we began exploring for ourselves what it took to select the most ripe peaches. Thus, understanding ripeness was a multisensory process that occurred in correspondence with the activity of harvesting peaches. Reading this excerpt and seeing the photo even made me fondly remember the taste of the best peaches I had, and the different kinds that were better for eating or better for making jam. Indeed, the process for reviewing all my material went along similar lines: I began by reading the 'short' field notes from my small notebooks, then full field-note write-ups on my computer that I made every few days on the farm. Simultaneously, I reviewed the photos and videos that I and my co-researcher Minae had collected from the corresponding day. In this way, and as Pink (2015) suggests, the 'doing' and the 'analysis' of sensory ethnography are opened to each other, making it possible for new meanings and understandings of the materials to arise (p. 142). I will now set up the frame through which I will be analysing the field materials, before taking us into the field.

4.2 The field

As I have shown and discussed throughout this thesis the use of sensory categories à la Howes and Classen (1991) for analysing and representing sensory ethnographic fieldwork is part and parcel of such research. In this section I will refer to the five-sense (taste, smell, sight, touch, hearing) sensorium that is commonly understood in the Western world. Nonetheless, following Fors et al. (2013), this analysis is rooted in the notion 'that sensory-embodied experience is multisensory; it is not in any essential way reducible to being of one or another sensory modality, but rather each is contingent on and indeed part of the production of others' (p. 175). Through focusing on these culturally mediated sense categories in the context of this thesis it becomes possible to explore their emplace-

ment in processes of multisensory, embodied and social learning (p. 178). Such an approach also connects with the one Slow Food takes to taste education, as described above.

Next, I want to situate the relationship between learning, education, doing sensory ethnography and sustainability by situating the way I understand them at work in what is to follow. First I begin with the idea that the sensory ethnographer's emplacement in the place-event of the research is a type of learning in itself: '[A] place is learned as it is made, and it cannot be made without learning happening' (Fors, et al. 2013, p. 179). Enfolded within the learning that constitutes place-making in this thesis is the Ingoldian notion of education which I have just discussed. This move is made possible by the fact that the primary field site for this project is the biodynamic farm—itself conceived as an organism by the being-in-the-farm, Stefano, the agricultural director of La Casa Rotta. Significantly, an organism is necessarily *in* the world, grown and shaped in correspondence with its environment, resisting any illusory attempt to conceptualise it as separate. Therefore, Ingold's (2000) notion of the human-as-organism emplaced within a farm which is also conceived as an organism by its principal human agent (both understood to exist as beings-in-the-world), makes the biodynamic farm an ideal place-event for education, learning, and sensory ethnographic research *in, with* and *for* sustainability.

4.2.1. A glimpse

A forty minute train ride south of Turin, Italy will get you to the town of Bra and close to the UNESCO World Heritage site of the Langhe-Roero and Monferrato hills ('the Langhe'), named for its

Figure 7. A panorama of wine grape monocultures in 'The Langhe', a UNESCO World Heritage Site named for its long history of wine production. La Morra, Piedmont. June 16, 2018.

long history, even from Roman times, in wine production. Such a coveted designation, however, does not impress Michele, who works in the Slow Food headquarters nearby and is the newest member of La Casa Rotta, along with his partner, Barbara, and their young son. 'I don't understand why they give such a designation to a place filled with monocultures', he comments as he drives us around the hilltop town of La Morra, which overlooks the valley. It is beautiful to look at and Michele thinks so too, which is why he drove us around this way, but I get his point. A valley filled with vineyards as far as the eye can see is quite a marvellous sight. All the neat rows curving across their slopes, the textures of the hills and the small towns with their church towers in the distance and their bells ringing in seeming competition from all around (Figure 7). For the outsider at least, it contains a notion of idyllic beauty which is greatly enhanced and excited by the fact that the vines grow the nebbiolo and grand cru grapes, which are regarded as producing some of the finest wines in the world—Barolo, Barbera, Barbaresco. Indeed, I had experienced these wines many times in my previous work during university. Michele's comment helps to frame an interesting question: Why is the sight of such a valley so pleasing to look at? Is it the patterns the vineyards make? Is it the excitement of idyllic Italian life? Or the wine made in the valley? Perhaps it is even simply the fact that it has a World Heritage designation or combination of these factors. To question only why the view is aesthetically pleasing, however, is to miss the whole picture. To Michele's eye, while perhaps it is aesthetically pleasing, the sight of a valley of monocultures is environmentally destructive and indicates a lessening of biodiversity. Perhaps then, another question can emerge: to the uninitiated, when gazing at agricultural fields, why are we not alerted to the same thoughts and feelings as Michele? The answer is easily gleaned by considering his employer's fight against such agricultural order, suggesting Michele's eye has been attuned—his sense of sight—in such a way that cries out at pristinely manicured rows of agricultural goods. In the modern era we are accustomed to seeing neatly patterned fields of farmland growing wheat or corn or grapes that it often goes unquestioned. I begin here, then, by asking how is it that we might educate the senses to be attuned to know environmental sustainability? The answer requires a multisensory investigation that begins where human civilisations do: in agriculture. So, in what follows is a series of multisensory, emplaced experiences on the Slow Food-connected biodynamic farm. I will begin by giving a sketch of the physical and social environment in which the fieldwork at the biodynamic farm took place, followed later by discussing and showing through photograph and audio/video, several instances of multisensory emplaced learning in, with and for sustainability.

4.2.2. The field arrangements

Figure 8: A view from the farmhouse: the biodynamic farm sits before a steep hill that partially comprises the ‘white truffle’ forest. Between the farm and the hill are hazelnut orchards, to the right are wheat fields that extend out of the frame. Vergne, Piedmont. July 7, 2018.

The biodynamic farm is part of the Ecovillage, La Casa Rotta, which is comprised of two restored farm houses that are separated by a steep, hilled-forest (Figure 8). The farm sits in a small valley near the foot of the steep hillside, north of the Langhe region and just outside the Barolo *Denominazione di origine controllata e garantita* (DOCG). The land outside this DOCG region is considerably cheaper than the land within it. There are wheat and hazelnut monocultures growing all around the relatively unkempt visual of the biodynamic farm, which is overlooked by the second house of the Ecovillage: a two-story section of an elongated duplex that has been, and is still being, restored. Being in or staying at the farm is typically referred to as staying in ‘Vergne’ or ‘the garden’. A walk down a dirt road toward the hill leads you through hazelnut orchards, past a small creek and through more orchards before coming upon the forest. Once at the forest you find (or possibly lose) a trail that leads up the steep hill to where the main house, Casa Rotta, is located. The two houses, the farm and two other parcels of land in nearby locations, comprise the built aspects of the Ecovillage.

An Ecovillage is a participatory communal living arrangement that is dedicated to the social, cultural, ecological and economic dimensions of sustainability with the explicit intention of regenerating social and environmental structures. Ecovillages are part of an international network that promote these goals—which are also aligned with the UN Sustainable Development Goal 11, regarding human settlements (What is an Ecovillage?, n.d., para. 11). La Casa Rotta was officially founded as an Ecovillage in 2012 by Claudio, a geologist, and his partner, Michela, employed at Slow Food HQ. They were the only permanent members until 2014 when the biodynamic duo, Ivana and Stefano, joined and La Casa Rotta began renting (and then purchasing) the biodynamic farm and adjacent farmhouse. Just weeks before we arrived in June, 2018, another couple, Barbara, an educator, and Michele, joined La Casa Rotta, making a total of three families as permanent members: six adults and four children. The temporary residents—volunteer farmers, students, researchers or an occasional airbnb guest—and friends of La Casa Rotta typically outnumbered the permanent members. While we were there, the largest number of guests staying between the two properties at once was ten, including myself and Minae, with the smallest number about six or seven. More accommodation space was being prepared at Casa Rotta, but we slept outside the house in Vergne in a small, cozy trailer (Figure 9). The two-story farmhouse consisted of three rooms on the second floor: a master bedroom, a small bedroom with an attached bathroom and a large family room in between that had been converted into a bedroom by boudoir frames and sheets. In the time we stayed, there were at least six people living in the Vergne property: myself and Minae, Ivana, Stefano and their son, Christina and Micol, and two other volunteers Nicolas and Jesus, who stayed one after the other. Christina and Micol were in the middle of a one year apprenticeship under Ivana and Stefano. Micol was learning biodynamic farming methods and he and Christina both were gaining experience to eventually manage an *agriturismo*—a small and ecologically minded bed and breakfast—in Tuscany in 2019. They both worked in restaurants nearby on the weekends. Other volunteers either lived up the hill in Casa Rotta or were local friends who came by to help on occasion. No money changed hands in the form of payments for any volunteer. Instead, lodging and meals were provisioned in exchange for the participation in the daily tasks of the farm or house rehabilitation projects.

Only in the spring of 2018 was the main house, Casa Rotta, ready to move into full-time. It had been winterised by installing a giant metal tube that wrapped around the living room and attached to the wood stove. The tube was stuccoed over and served as a long bench which could be heated in the

Figure 9: Our living quarters for the summer. Unbearably hot in the day but perfect for sleeping through the cool nights in Vergne, Piedmont. June 11, 2018.

winter via the stove. Such features evoke principles of sustainability that focus on the use of low-impact technologies: here the building material of the house is well insulated through natural earth stuccoed over the brick structural foundation. Such a technique allows heat to be trapped in the winter from the wood stove and the sunlight coming through the large windows. It can be quite cold at times, especially if no fire is lit, and one is made to wear a couple layers of clothing even inside, but the particular feeling of the heat of a warm fire certainly has its pleasures. In the summer, open windows with curtains drawn during the day, make for a cool refuge from the outside heat. And indeed,

the coolness of the house in the hot day always brought me back to summers as a child: that unique feeling of coolness that only the earthen house can afford. I remember all my friends thinking it strange that we did not have an air conditioner.

It is interesting that this relatively low-impact, or, sustainable, way of regulating temperature in a house necessitates *feeling* the seasons. One is constantly seeking warmth in winter and to cool off in summer. The everyday temperatures of a season drastically affect the way everyday lives are lived out—a contrast to temperature controlled housing in much of the modern world. It is worth wondering how feeling the seasons connects, disconnects, discombobulates or focuses your attention to particular aspects of your environment, though I will refrain from attempting to answer this here.

4.2.3.. Setting up the Ecovillage

After finishing university and moving back to the area, Claudio and Michela had difficulty feeling connected with their neighbours, and they found that the countryside was even more filled with monocultures than when they had grown up. Michela volunteered with Slow Food in 2006 and began working full time in 2007 around northern and eastern Africa for seven years. Her work was to investigate local gastronomy and local food cultures that were being lost to industrial agriculture, and to work on building their importance locally. She did this work from 2007-2012 before coming to the conclusion that she wanted to be doing the same thing in her home region.

Claudio moved to this region from Poland when he was seven years old and considers this land very much his home, taking wine with his dinner as opposed to the hot tea he might have had as a child in Poland:

> Claudio: Some traditions are strongly connected to the territory. When you move somewhere else, maybe you can try to redo them but they don't have the connection with the place you are in the moment because some aspects are not there…you cannot reproduce the same situation and the same atmosphere.

Such a comment partially reveals the roots of the impetus for setting up the Ecovillage: the desire to re-establish the interconnectedness and sociality of the community in their home region through re-connecting with the physical land, the *terroir*, around them. And throughout our time in the Ecovillage the sentiment that the health of the land which grows the food is reflected in the health of the

people, was palpable. To do this in the first place requires regenerative practices to restore prior damage. Such an ethos is embodied in the international Ecovillage movement and is even embodied in name La Casa Rotta, 'casa' meaning 'house,' and 'rotta' having a double meaning of 'broken' or 'rooted'. ‘We like the playfulness of the name’, says Michela. The first action toward establishing the Ecovillage was to purchase the destroyed house on the top of the hill and rehabilitate it with natural and local materials—like straw, clay and wood—as much as possible. Nobody wanted to join them at first and many people thought they were ‘crazy’. Michela recalls a man commenting on the ‘destroyed’ house they had purchased, telling them ‘you will die, and this house will still be destroyed’. Sitting in that very house doing the interview with them, it was apparent that the house had very much been restored and the man’s words rang hollow: the inner walls had the earthy smell and touch that reminded me of the adobe mud-brick house that my father and his friends built, and in which I grew up. The wooden floor planks in the foyer and the bedrooms upstairs were smooth and new looking, and the big westward facing windows let in the sunlight and brightened the wood and house.

Meeting the farm managers, Ivana and Stefano, in 2014 jolted the Ecovillage project into life. Michela describes the principles she and Claudio had been seeking and which they discovered Ivana and Stefano were as well: ‘a farm based on organics, local and farmer propagated seeds, no chemical inputs, lots of experimentation to keep soil fertile and create a place of biodiversity.’ Ivana and Stefano, also having grown up in the same region, had similar ideas, and the two families agreed to band together and inaugurated the biodynamic farm. The biodynamic farm in Vergne comprises around five of eight total hectares of farmland directly within La Casa Rotta care. The biodynamic (and formerly organic) principle that sees the farm-as-organism requires the reuse and recycling of all or most of its outputs as inputs, meaning that composting and mulching the farm’s own waste to maintain and even build healthy soil are key foundations. Synthetic inputs, even simple nitrogen inputs commonly used in modern organic (mono)agriculture, are strictly forbidden. As the farm is relatively young, it is still being developed and does not yet have enough animals, for example, to use entirely its own manure for compost. However, they have recently received their Biodynamic certification.

The farm itself is central for building the community connections that La Casa Rotta sought in the first place. In the second week of our stay they held an 'open farm' day. About 40 people: families, students, close friends and strangers descended on the farm. Casa Rotta beer made with the farm’s

Figure 11. Stefano. Vergne, Piedmont. August 6, 2018.

own ancient wheat and in collaboration with a local beer artisan was served. Children were led by two local artists over to some old peach tree stumps to paint them into animals (Figure 10), a vegan chef known for occupying empty buildings in Milan to set up soup kitchens for the homeless, prepared a large feast, and attendees met new and old friends, played music and sang into the early hours of the morning. Other past events have included partial hosting of an international film festival in which food was served to match the theme of the movie. Food-centered workshops concerned with 'doing it yourself' included lessons in pasta, bread, pizza and a pizza-oven construction course. They also frequently host students from the University of Gastronomic Sciences, Slow Food's own university in Bra which was founded in 2004. While these events located the farm or the Casa Rotta house as the physical places of community, collaborations with regional, national and international partners are also import for building sustainable community relations. Along with their beer, La

Casa Rotta works with other local artisans to process their wheat into flour and pasta and their tomatoes into canned sauces. They have worked with Libera, an anti-mafia organisation that operates in northern Italy, and are affiliated with several international inter-cultural exchange programs for students, volunteers and immigrants and refugees. In fact, I myself discovered La Casa Rotta through one organisation, WWOOF (World Wide Opportunities on Organic Farms). In this way, La Casa Rotta can be said to 'rooted' into a physical space that seeks to nurture the land, and uses this platform to then open to the wider local and global communities to generate social cohesion and interconnectedness. Social, cultural and environmental sustainability, then, are all bound together through the rootedness of the biodynamic farm, as food often plays a central role. To understand *how* these forms of sustainability are bound up, we must begin by examining the farm and how its growth and care in the pursuit of sustainability are situated and enacted in everyday life.

4.3 Emplaced multisensory learning in and with sustainability

It is certainly the case that a soil which has a taste of perfumes will be the best soil…The earth sends out that divine breath of hers, of quite incomparable sweetness, which she has conceived from the sun. This is the odour which ought to be emitted when the earth is turned up, and the scent of the soil will be the best criterion of its quality.— Pliny*, Natural History,* Book XVII (as cited in Classen et al., 1994)

Here I discuss encounters on the biodynamic farm through the Wester five-sense sensorium, as multisensory, emplaced, a form of learning and ultimately, an education in and with sustainability. This approach takes perception as multisensory and treats taste and other modalities as analytical categories through which to explore the emplaced multisensoriality of, for example, gustatory learning, or ‘gustemology’ (Sutton, 2010, p. 469). These emplaced, multisensory experiences on the farm are historical, as I have described in the auto-biography above, an saturated with a notion of *terroir* as it is understood by the members of La Casa Rotta (see Claudio’s quote above) and Slow Food’s founder Carlo Petrini (2001):

> The combination of natural factors (soil, water, slope, height above sea level, vegetation, microclimate) and human ones (tradition and practice of cultivation) that gives a unique character to each small agricultural locality and the food grown, raised, made and cooked there. (p. 8)

Stefano (Figure 11) is the agricultural director of La Casa Rotta and the person we spent a majority of our time in the field with. His long hair is usually kept in a straw-brimmed hat, he is gentle and soft-spoken but direct in his communication and his smile shows through his eyes. Stefano grew up on a small farm only ten minutes from Vergne, in the Barolo hills region famous for its high-end wines of the same name. His grandparents maintained (and grandmother, mother and aunt still maintain) a multifaceted farm further to the southeast, in another famous wine region also part of the Langhe, Barbaresco. This farm is one of the only properties in the area that has not sold its land to major developers looking to put up vineyards. When we worked there one day, if felt like a small oasis amongst hills of grape and hazelnut monocultures. Growing up in the area and on farms, Stefano did not much want to follow in the footsteps of his family and studied anthropology and comparative religion in university. However, in the process, he found a new interest in the agricultural practices of ancient and indigenous societies, which he says was a pivotal point in his life. After uni-

Figure 12. Mother Mina and her kittens taking refuge from the mid-morning heat. Vergne, Piedmont. July 8, 2018.

versity he worked at a company designing automatic breaking systems for cars but quit after two years to become a baker. Eventually he found his way back into farming and took up interest in the biodynamic approach, infused with his lifelong experience in the field and ancient inspiration. Through our time in the garden with Stefano, we came to discover (read: were educated) how tasting, smelling, touching, seeing and hearing are all integral, interrelated parts of working with the biodynamic farm.

Everyday on the farm was unlike the next and Stefano loved to point out that the variation of experiences in running the biodynamic farm was a stark contrast to the work of an industrial farm, 'Everyday something new. Always, things are changing, it's never boring.' Indeed, in the surrounding monocultures you rarely saw anybody, and if you did, they were most likely riding on some type of

Figure 13. 'There is something in this honey other than the sweetness, but I can't quite tell what it is'. Vergne. July 11, 2018

tractor. The exception I witnessed were the small group of migrant workers who occasionally emerged from one of the several nearby hazelnut orchards.

Breakfast

Most days of the week, including weekends if we had not made plans to do something else, we would emerge from the trailer around 08:30, stretching and yawning, almost tripping over one of the scurrying kittens recently birthed by Mina, the house mother (Figure 12). Upon entering the farm-house you might find a couple other volunteers sleepily preparing a breakfast which usually consist-ed of La Casa Rotta's own corn galettes, which are similar to dried rice cakes except they are made with the ancient corn varieties grown at the farm. There was often bread which Stefano, Christina and Ivana made every Thursday to sell in the weekend market or deliver to customers. Always there was jam, made principally by Ivana. The first half of the summer it was strawberry preserves and when that large supply was finished off, we made peach preserves by gathering unusable peaches, cutting off the damaged or mouldy parts, and cooking them down. There was no waste that was not necessary all matters of the farm. Honey was also ever-present and came from the bees they kept for pollinating and making honey (Figure 13). If coffee was not already made then taking the initiative was always appreciated. There was only a firewood stove in the main room so you needed to take the mocha to the large store room in the back, where the gas stovetop and oven combo were located. Mocha coffee was made several times a day: at breakfast, after lunch, morning or afternoon breaks and even after dinner. One had to listen carefully from the front room to hear if the mocha was ready, by which it made a loud bubbling sound. While the coffee break times were variable, the one certainty of coffee making was that anytime someone came by the house, whether a friend, a cus-tomer, a stranger or a member of the Ecovillage, coffee was offered and almost invariably accepted. This was a practice that we picked up on quickly and carried out whenever we had a chance. We saw such an action as a way of joining with the sensory-cultural practices at the farm (Pink, 2015, p. 101). After breakfast Stefano would tell us what things needed to be done, often referring to the large hand-drawn map of the farm which included a diagram of tasks that needed doing. In the morning, this typically meant harvesting before the day got too hot. For example, because peaches needed to be harvested as they became ripe, they needed to be picked in the morning when they were still cool from the night. If you waited too long in the day to pick them, they became soft on the outside from the warm sun and were more likely to get bruised. Therefore, in my memory the peaches always feel cool to the touch and have a fresh, crisp aroma when you put them up to your nose to smell them.

The importance of knowing when peaches were ripe (which I described earlier) came to a climax one day. Three of us: myself, Minae and Jesus, were asked to pick around six crates of ripe peaches from 'the far row' (there were three rows of peach trees, each with a different kind of peach), which would be packed in bags to deliver to customers that day. After we had collected the requisite number, Jesus, who was new to the farm, had apparently decided that the peaches in 'the middle row' had 'looked and felt ripe', and so he began picking them, despite our reminders that it was not necessary. Minae and I went back to the farm house. Jesus later came back with another four crates of peaches which looked questionably ripe to the eye. I asked him, 'Are you sure those are ripe?' 'Yeah', he quickly assured me. 'Did you taste them? I asked. He mumbled a 'yes' as he bent down to pick one up, put it to his mouth and bit down. The cringing look on his face seemed to match the unfamiliar sound of an unripe peach being bitten into. It was painful to witness the sound and watch his face. He was clearly embarrassed and I felt a little bad. Those peaches ended up staying in the storehouse and most of them eventually rotted because there was no more room to store them in the large refrigerator. Despite the fact that it was an embarrassing moment for Jesus, it was, significantly, an emplaced, multisensory learning experience for him—and myself as well. I understood at this time the full significance and importance of knowing ripeness in peaches. For one, picking them early results in wasted produce, a misfortune on multiple levels. Second, this experience drew my attention to the process of picking peaches through my own cultural sensory categories but also as a fundamentally multisensory experience. Take this example:

> *You are standing amongst the peach tree rows with tall grasses all around and grasshoppers jumping at every step. You see the colour of a peach that might be ripe. It is mostly red and slightly orange. But the question you might first ask yourself is 'How do I know that the colours of 'mostly red and slightly orange' are the colours of ripeness? The answer is revealed through your emplacement—your previous experiences eating peaches. Imagine that only three weeks ago, as you bit into a red, slightly orange peach you felt its texture soft and luscious, the sound of the bite was gentle and juicy, it dripped down your chin and the taste was sweet, possibly even creamy. You felt the peach in your hand and it was tender to the touch, and you though 'How great this smell is—the fresh smell of a peach'! Now, three weeks later you are in the peach field harvesting peaches. You see a peach which is red and slightly orange and you know, perhaps without even thinking about it (because it is embodied) that that peach is likely to be ripe, and the reason you know this is because of your multisensory, emplaced learning experience that happened through eating the red, slightly orange peach three weeks prior. So you go to the peach, you examine its top to see if it is red, you gently feel the peach's firmness and you may even put it to your nose to smell it. You determine it is ready to be picked and you reach out, peel it off the branch and place it in your crate.*

Figure 14. A mid-day bounty of tomatoes. The ones with a little green on the top were picked a couple days early due to harvester error. There are at least seven varieties in theses crates. Vergne, Piedmont. July 8, 2018.

Such was the process that I discovered in the picking of peaches. The fact that Jesus learned it differently from myself makes little difference: he still learned about the harvesting of ripe peaches through a multisensory experience. And so it was with all other learning in the farm—that fact of being emplaced within a rich sensory environment offered endless opportunities for learning through all the senses.

Other crops that needed morning harvests were zucchini, of which there were many plants that seemed to never stop producing. Indeed, zucchini featured in at least one if not two meals every sin-

gle day we stayed on the farm. Tomatoes, when they began their production, were also commonly picked in the morning, but always after peaches and/or zucchini (Figure 14).

Lunch

Unless you were preparing it, lunch was signalled by the call of '*PRONTO!',* emanating from the back door of the farmhouse around 13:00 or 14:00 each day. If you were one of the people preparing it, then you would need around one hour to prepare it. Below, I have copied a fairly representative description of a typical lunch, which invariably consisted of some grain, a vegetable protein like beans, a medley of vegetables, among which zucchini always found a place, and large bottle of spicy and deeply flavourful olive oil that was poured over literally everything that was on your plate. An excerpt from my field notes reads:

> Lunch is a feast, more so because we have been working hard all morning. First I learn how to say "smells good" (parfuma bene) and the good smell comes from buckwheat with beats, black-eyed beans with carrots and cous-cous with onion and zucchini. The olive oil is really becoming something I look forward to at each meal time. The scent of it and the slight sharpness that it has in your mouth are something I'm starting to go crazy for.

I remember being astonished to see how olive oil was used, poured generously over all the contents of one's plate. La Casa Rotta ordered olive oil in bulk from a biodynamic Ecovillage in Tuscany and it was a prominent feature at every single meal. It tasted nothing like any olive oil I had tried before. This experience has rendered all olive oil that can be purchased in a regular supermarket superfluous for me. Back in Oulu I have even stopped buying olive oil. Instead, I found a good quality rapeseed oil from a farm in southern Finland and this has been a fine addition for cooking or making salad dressing. This raising of taste standard, as we have seen, is something that Slow Food treats as desirable. Such taste education elevates the standards of the palate, ideally resulting in a demand for better quality, which in turn, can be and should be linked to healthy or regenerative land practices. Hence, upon returning to Oulu we stopped purchasing cheap canola oil and began purchasing an oil that, while it does not taste the same, it is high quality, grown organically, and is more commonly associated with the cooler climate where we live. Further, rapeseed flowers are excellent for supplying nutrients to soil in crop rotations as well as promote bee activity. The issue of quality oil, then, became linked to wider environmental issues and encouraged a change in my consumption pattern elsewhere. Nowadays, when a friend says to me, referring to good quality beer, 'I don't want to get used to it because then it will ruin my ability to drink shitty beer.' I usually say 'Good!'. From Slow

Food's perspective, 'ruining' one's taste for a cheap product is precisely the kind of process that might promote the health of the soil in which a good is grown, . And this is something that came about through the everyday practice of consuming the olive oil used by La Casa Rotta.

After lunch, coffee is prepared and dishes are washed by those who were not involved in preparing it. This was not an overtly prescribed situation, rather it was a flow that was already in existence and newcomers slipped into it when they came to Vergne for lunch, as we did. The afternoon hours were typically too hot to being working right away, especially from July. This 'siesta', or early afternoon nap, long associated in my youth with Spanish-language cultures (which in the U.S.A. is often loaded with racial stereotypes of being lazy) took on new significance under the blazing heat of the early afternoon sun. Rather than an act of laziness, the afternoon downtime was understood as an act of conserving one's energy by keeping indoors during the hottest part of the day and working through the evening to maximise the work that needed to be done on the farm. Therefore, the mid-afternoon was often the time for taking naps and relaxing. Stefano, whose work never seemed to pause, could be seen on his computer managing farm sales to customers or doing other inside jobs like preparing the bread. I typically used this time to write up field notes or do readings related to my research.

Around 16:00 or 17:00 we would go back into the garden and work under the cooler conditions. Often the evening work consisted of preparing areas of the farm for sowing new crops into sections that had previously grown a different crop. The new crop was usually intended to supplement the soil with nutrients that may have been depleted by a previous crop[25]. For example, one day we planted several rows of different kinds of beans in soil that Stefano told us had need of nitrogen, beans being crops that naturally fix nitrogen into the soil. The next year, however, this area would be left to grow wild with grasses that keep soil moist and prevent erosion. Combined with biodynamic compost and mulching, this practice works to actually build soil up over time, according to Stefano. In fact, any parts of the farm that were not planted with a particular crop were invariably covered in wild grasses and flowers which served not only to keep grasshoppers away from the food crops and attracted bees to the flowers mixed in, but also protected soil from erosion by keeping it moist—all practices that take an ecological view of the farm as a living organism. Indeed, learning about this was not something that was simply told to us by Stefano, it was something we experienced first-

[25] In his classic book *Farmers of Forty Centuries*, Professor King (2002/1911) writes about the crop rotation practices of Chinese farmers, a practice that kept soil healthy and stable by preventing erosion (pp. 20-21)

Figure 15. The painstaking work of saffron bulbs. The largest ones are supposed to produce three flowers, the medium sized one flower, and the smallest bulb will produce a larger bulb. Vergne, Piedmont. June 25, 2018.

hand—sensorially. During a particularly hard week of work it was our job to dig up saffron bulbs. There were two long rows where the bulbs were buried. Covering these rows were wild grasses and flowers. Three of us worked together: one person taking out the grasses with a scythe, another using a pitchfork to turn up the earth and the third digging through moist clumps of clay soil to search for the saffron bulbs (Figure 15). We took turns doing each one. On the first day we cleared a large amount of the grasses from the rows with a scythe as we worked through the moist soil. At the end of that day there was a considerable amount of one row that had not yet been dug up for saffron, yet

the grasses had been cleared from it. On the next day when I took a pitchfork to the row I noticed it had lost its moisture and had become extremely dry, making it much more difficult to turn up the earth with the pitchfork and to find the saffron bulbs buried within, extending our time spent working on it considerably. The takeaway lesson I learned was about the relationship between grasses and soil and the importance of occasionally 'wilding' land in order to keep it moist and protect against erosion. But the *way* in which we learned it was deeply sensorial. Here is an excerpt from my field notes to better evoke the circumstance:

The moist soil that softened the work of digging in the field yesterday contrasted sharply with the dry hard clumps of today. Today required a significant amount of finessing the pitchfork into the ground at several angles before we could turn up the earth without bending the pitchfork. This then required using a small sledgehammer to break apart the hard dirt clumps without destroying the saffron bulbs inside. The aches and pains that developed in our bodies were the subject of much conversation today. Blisters developed on our hands and altered the way we worked; the dryness in the air as we worked on the barren top soil was wholly different than working in the peach fields or among the tomato plants and the thirst for water to wet our dry mouths became more frequent, breaks from the work to leave the field also became more frequent. Tensions boiled between Minae and Jesus, the former upset with the work ethic of the latter, not least because the soil had become so difficult to deal with.

When all was said and done, the importance of the lesson learned regarding the relationship between soils and their grasses was driven home by the sensory experiences of body pains and exhaustions, thirsts and scent of dry earth, all of which contributed to rising social tensions. This instance stands as moment of sensory emplaced learning that is connected with the larger agricultural issues of erosion and soil mismanagement that industrial agriculture is accused of perpetrating by Slow Food, or Vandana Shiva, for example. Such a lesson, while great to reflect on, is certainly not obvious. It is rather something to which attention must be drawn in order for learning and education to take place —reinforced by the multisensory engagement of the person in the particular environment.

Dinner

Dinner was often late and was typically similar to lunch. I remember the best dinners being ones in which the work during the day was long and exhausting. Coming into the kitchen to eat the food on the table was immensely satisfying (Figure 16). One of the best moments was coming in around

Figure 16. Dinner of wild rice, baby carrots, fried zucchini, potato and onion, glistening in olive oil. La Casa Rotta sourdough bread leans on the plate with a tiny slice of sausage from a weekend trip to the nearby French Alps. Vergne, Piedmont. August 2, 2018

22:30 to Ivana dumping fresh handmade gnocchi into a boiling pot of water. All the work of the day seemed to wash away with the excitement of that dish. Almost all meals were vegetarian but none of the members of La Casa Rotta identified as vegetarian or vegan, and occasionally there was a little sausage on hand. And once Ivana cooked up two whole fish which greatly excited Minae except that

there were no chopsticks to use and she had a much more difficult time picking out bones than usual. Meat was somewhat more common to find up the hill in Casa Rotta, but oddly it was not some-

thing missed in the hearty meals. For example, the fact that we ate zucchini nearly everyday had become a running joke: 'What are you making?' *'Zucchine carbonara/amatriciana/al forno!'* (cue laughter). However, eating zucchini every day never actually got old, and each time it was prepared differently. It might be that each time the texture was different, or the way it was cooked was different, or the other ingredients it was mixed with were different, and on and on. The endlessness of eating zucchini surprisingly never became boring. I am reminded again of the Rozin's paper (Rozin & Rozin, 2017/1981) in which they discuss the seemingly universal human desire to continuously seek out new ways of preparing food and generating flavours. Such a scenario could be seen at play with zucchini in the amazing variety of ways it was prepared, even if only slightly different. Crucially, the ubiquity and constancy of day in and day out eating of the same type of raw ingredient, while seemingly uncommon today, represents the history of food consumption by humans and non-humans alike, because such an occurrence is *seasonal.* Seasonality is paramount to the concept of sustainability precisely because it works *with* the ebbs and flows of the natural world. Therefore, the presence of the taste of zucchini everyday can be said to be one indication of living within the means of nature, and therefore is sustainable. Claudio and Michela touched on seasonality in our interview as well:

> Claudio: Even people in the countryside don't understand what it takes…the land it takes to grow tomato and cabbage are not the same. Even seasonality is not clear.

> Michela: People ask for strawberries in winter. If you lose contact with the land and the rhythm of the nature, it is difficult to have the perception. It happens to me sometimes because I'm working in the office.

Further, it is precisely a situation in which needing to rely on the same foods day after day that gives rise to the culinary variations on a theme discussed by the Rozins. However, just as eating the same thing day in and day out can become monotonous if the preparation does not change, it may equally be said that the quality of the raw material—what we experienced on the farm as the *strength* of flavour of the raw material—can be at least as important. We noticed this not only with zucchini but also with tomato. In my childhood I often left tomato on my plate because its texture was really crunchy or else wet and soggy, and it did not have a particularly strong taste in any direction, which made eating it feel somehow dispensable. Contrast this with the first day of tomato harvest in which a bowl of several different kinds of tomatoes were brought onto the table as a *dessert* after dinner.

Everybody grabbed one and bit into it without even pouring olive oil on it, exclaiming their joy, so I did the same and the flavour was unlike any I had ever come across in my life. The fact that there were 27 different types of tomatoes grown on the farm, all with different flavours and textures, none of which were superfluous, was a significant aspect of our time on the farm. Zucchini were similarly better than any I had ever tired: the texture was always crunchy, full and hearty, the flavour was deep and strong. When I asked Nicolas, a volunteer who left in late June to go back home to Brussels, only to return in late July, how the food was in Brussels compared to the farm, he joked and said, 'I mostly ate French fries and beer!' Then, in more seriousness said 'I didn't eat a lot of vegetables there because here, eating vegetables feels like you eat *something.* There, is more like water'. Such a sentiment astounded me, coming from a person who had earlier told me that, in his first weeks at the farm he was complaining to his friends back home that there was no meat!

It is here that the issue of the quality of the raw ingredient that Petrini (2007) raises becomes relevant to a whole host of issues, not least the propensity of young children to not eat their vegetables. Specifically, under Petrini's insistence that 'the raw material is what makes possible the cultivation and perception of the good' (p. 102), the vegetables grown on the biodynamic farm were, for all intents and purposes, 'good' in the Slow Food sense. This was apprehended not only be myself, Minae, Nicolas and Jesus (with his honey), but also by the chefs of the restaurants in the nearby villages and in Alba (the regional city seat of the wine valley) whom Stefano took me to see when he brought them vegetables, and the attendees of a tomato tasting workshop in Salone Del Gusto in Turin. There may be many possible answers as to why Stefano's raw materials tasted so satisfying and so deeply imbued with flavour. Carlo Petrini would put it down to its 'naturalness', but if you were to ask Stefano, who revelled in stopping his work to share his philosophies, he would tell you it has to do with the soil, its maintenance, and the biodiversity that makes up the organism of the farm. The plants, birds, bees and other insects all communicate with each other in a complex ecosystem, within which Stefano carefully observers through entire perceptual system and attempts to augment by introducing new elements that he judges to be effective in keeping the farm functioning as an organism. To Stefano, he cannot control the farm, rather he considers himself as an agent amidst the environment in which the farm is enfolded, whose work is to help the farm to prosper.

'*I am the nature*', Stefano told me one day. This statement rings with the echo of Ingold's notion of the human-as-organism, the inextricable being-in-the-world. 'This concept is very important', Stefano explained, 'Imagine you bring two information—cards and wine—that creates a movement of

action and certain effects happen—laughter or fun maybe. Same for plants and field, you must provide certain information'. In this regard, Stefano is critical of the industrial systems of agriculture whose methods he is fond of calling 'crazy'. 'Modern science and categorising is good and it is useful, but it isolates'. He acknowledges that 'It is good to learn that H_2O is what makes water, but the *process* of water is more important. The ancients didn't ask what water is, they ask, why did God make water do this? You need to observe the mind of nature'. Observing the mind of nature in Stefano's terms meant attending to its movements—the onto/epistemological basis of being-in-the-world for Ingold (2018b) as well—and in order to do this, one is required to be fully engaged with their whole perceptual system—their whole sensorium.

Stefano talks about his plans to start a more formal biodynamic farmer apprenticeship system, and then moves to talk about education more generally. Stefano's own son goes to a Free School which bases learning around practical experiences like shopping and using the experience as a way of learning math. I spent a day at this Free School for one of their summer classes. Most of the day was spent in the forest, watching the kids jump in a small creek and explore the unexplored steep wooded hill. Earlier in the day the teacher had told me that the kids were studying water and the kids showed me the series of drainage systems they had dug on a slope. They ran up and down damming certain sections to see which way the water would run, working together to make the system function in different ways. Later, in the forest after the kids had gone swimming I asked if this excursion had anything to do with the water lesson from earlier. The teacher laughed and said 'No, just come out here to explore'. Watching the kids play in the forest brought strong memories of my own childhood experiences of doing a very similar thing—though not in school. It also rings with current discourses about children and play. It makes me wonder why such a practice can easily happen in a Free School, but not public schooling more broadly.

'In the school there is the problem that talking about these ideas is very different from being able to go in the field and 'see' these ideas', Stefano remarks about learning farming and agriculture. 'You can have basic knowledge in classroom but when you go to the garden you see nothing.' This comment epitomises the case for bringing the whole sensorium into education. It is through this practical engagement or 'participatory practice' (Ingold, 2018a, p. 17) in which real education and meaningful learning can be found. From here, then, one could argue that a meaningful education in sustainability can only be found in the practical participation of sustainable practice—a place that, for example, the biodynamic farm-as-organism readily affords.

Stefano shares with me their experience of sowing and processing the wheat they grow on the farm. Three different heirloom types of wheat are grown, which, in the case of wheat means that these seeds fall outside of the varieties that were subject to irradiation and selective breeding of the 1950s. The modern wheat seeds are bred to grow short grass that is all roughly the same size to make it easier for harvesting by the big tractors. Stefano tells me that the industrial wheat in the post war era was moreover selected to have a much higher gluten content so that it could withstand the machine

Figure 17. During wheat harvesting, Minae says goodbye to the ancient wheat before it becomes beer, pizza, pasta and bread. Other green grasses can be seen growing amongst the wheat. Vergne, Piedmont. July 10, 2018.

kneading that happened in the bread factory[26]. Four years ago was Stefano's first time to grow, harvest and process wheat in 'the old way'. He tells me that they plant the wheat by using a method in which he begins in one corner of the field, takes a particular kind of mechanical step and simultaneously hurls the wheat seeds in an arc deliberately toward a planned direction. He does this through the whole field until it has all been covered and draws a diagram of the mechanics and logic behind it. He then shows us video and we all laugh because of the awkward movement he makes when throwing the seeds. This particular technique he has used every year and it is clear to see by his smile that he loves this activity. However, they have changed the way they harvest and process since the first year. In the first year they cut all the wheat by hand with scythes, extracted the wheat from the grass and dried it, then ground it in their small flour mill. The purpose of doing the whole process, Stefano tells me, was to understand the *doing* of it. In other words, harvesting the wheat 'in the old way' was so that they could experience the multisensory process in order to more deeply understand the value of what it means to grow, harvest and process a plant on which people have always depended, directly or indirectly.

This summer, having already gone through the processes of making wheat into flour by hand, the wheat is harvested by a big tractor which also does the work to separate the grain from the grass and dumps it out in no time at all. We are looking at the other half of the wheat field, noticing how tall the grass is compared to the surrounding fields, and also how all the grass seems to be of different heights, rather than uniform like the others (figure 17). Stefano calls us and asks 'Do you want to see our future beer?' We go with him to the front of the farm house and watch (figure 18). After the grain is emptied, Stefano hops into the trailer and begins to rake the wheat berries out. He says they need to dry out for around two weeks and that requires raking them and shuffling them around every few hours. He picks up a wheat grain and bites into it and I ask him what he is checking for. 'The grain should be very hard. It needs time to dry'. Minae and I both pick up a wheat berry and do the same, biting down and noticing that while it is hard, it is possible to crush without too much effort. Stefano says it should 'hard hard, this is too soft'. Here we find Stefano doing what he often does in 'seeing the farm' which is to taste the farm, smell it, touch it, listen to it and watch it. Let us peer more closely at the multisensory, emplaced experience of tasting on the farm.

4.3.1. 'You can eat everything!'

[26] This makes me deeply consider the relationship of this process to the modern ailment of 'gluten sensitivity' to a grain that is known to be among the oldest staple crops in the world—a crop that marks the beginning of *civilisation*. Have people *always* have gluten sensitivity, then? Or is this a modern issue?

In the morning of our first day Stefano takes us outside the front door to show us some of the flowers and herbs that are growing. He identifies four different flowers (Figure 19) and describes their properties: cosmos, which are pink and white, are used in salads and in making butter; calendula can be used as an internal or external remedy for inflammation or in salad; Tagette has a bitter taste and is used in making medium soft cheeses; nasturtium are spicy, like wasabi or horseradish, rather than like chiles. Furthermore, these flowers attract bees—a crucial factor in the growth of food and promotion of biodiversity. Minae is quick to exclaim 'you can eat everything!'. This expression is uttered throughout the summer with additional qualifiers such as 'You *really can* eat everything!' The taste of the wasabi-like nasturtium was intriguing because just two months prior, at the Terra Madre Nordic conference in Copenhagen we tried a foraged weed-grass native to the Danish shores (that was making its 'comeback', the vendor said) and it too had a similar spiciness. For one, the fact that such 'weeds' are edible and the fact that we, as many people would be, were surprised that they could be eaten reifies a statistic mentioned earlier by Petrini (2007) regarding the tiny proportion of total food crops grown by industrial agriculture and known to consumers, in relation to the total number in existence on the planet.

Indeed, the notion that everything is edible—if not at least taste-able—extended far beyond the flowers in front of the farmhouse. Tasting, or utilising the mouth to masticate or make a judgement, was involved in countless activities. The mustard plant, for example, could be found growing wild all over the farm. Of course, one would never know that it was a mustard plant unless attention was brought to it first. Once it was, not only be identified by sight, it could also be identified by taste—mild at the start of our fieldwork and spicier toward the end. Indeed, the taste changed *with* the development and growth of the plant in its (biologically diverse) environment. Watching Stefano make his rounds through the farm was instructive. His head moved from side-to-side looking at his surroundings, often bending over to inspect a plant from another angle, feeling the leaves and stem, looking underneath the leaves, rubbing the leaves between his thumb and forefinger to smell them or else taste them. Rather than tasting simply for pleasure, though that was also a reason at times, the tasting had more to do, it seemed, with inspecting the growth of the plant—something that can be said for all the other sensory actions (looking, touching, smelling, etc) directed at plants. And this kind of tasting was not limited to plants. In preparing an anti-fungal spray for the tomato plants that had acquired a fungus in the big greenhouse, Stefano put a small teaspoon of baking soda into a large spray bottle, shook it and tasted the mixture before instructing Minae how to spray in the

Figures 20, 21, 22. From left to right: Fig 20. fungus on a tomato plant leaf; Fig 21. Stefano preparing the remedy (sans tasting); Fig 22. Minae spraying the plants. Click link for video of Figure 21. Vergne, Piedmont. June 18, 2018.

greenhouse (‘Not so water is dripping off the leaves, just little little’). Taking his cue, Minae later tasted the mixture of water-baking soda before running out, so that she could refill it with a similar ratio and finish the job. After having done so she came to me excitedly telling me how the taste was very subtly salty and bitter but that the key was the *consistency* (Figure 20, 21, 22). This example is noteworthy because, again, it demonstrates how Stefano observes his farm in a variety of sensorially engaged ways. It also depicts an instance of sensory learning, not only because Minae did as Stefano did, but because, absent of Stefano’s description of what it *should* taste like, she discovered *for herself* the appropriate ratio for making the tomato plant remedy by taking a cue from Stefano. Such learning brims with the notion of education as a kind of correspondence (Ingold, 2018a p. 13). In this case the type of learning that took place is intimate, connected to the health of plants that are meant to provide sustenance not only for people but for the land, and framed by a global movement that holds the idea of 'naturalness' as the glue that binds the 'good' and 'clean' of the Slow Food philosophy. The emplaced actions of Minae’s correspondence in this case resonate from the very ground on which the correspondence takes place, out to the global Slow Food movement and its aims. Through tasting in particular, a theory of place renders the tastes, flavours and textures afforded through the biodynamic farm as something that is incorporated within the aims of the global

Slow Food movement, making the emplaced taste-learning on the biodynamic farm a site of resistance against destructive agricultural processes. Simultaneously, one undergoes an education in what sustainability means through our multisensory being-in-the-world (Fors et al. 2013, p. 179). Within such considerations, this emplaced, multisensory moment of learning is part of an education in and with sustainability—a taste, flavour and texture toward a more sustainable world.

4.3.2. Biodiversity and its crucibles

Figure 23. Zucchini crops reaching toward the sun. Vergne, Piedmont. July 9, 2018.

Biodynamic farming is often criticised by mainstream science as being unscientific, a bogus superstition. It is not my intention here to argue whether it is or not, but rather to show the sensory education I undertook as a participant of the biodynamic farm under the purpose of promoting sustainability in all its formations. What I can say is that my sensitivity to synthetic chemicals (bathroom cleaners, nail polish, etc.) was rarely piqued while on the farm, occurring only when I smelled the leak of gasoline from the borrowed tiller or walked through the neighbouring hazelnut orchard after it had been sprayed with grass killer. The sprays used on the biodynamic farm were either not overtly discernible, as Minae's baking soda spray, or they smelled sweet, as when Micol dawned an old school copper backpack spray canister filled with *bokashi* (a homolactic fermented concoction thought to originate in Korea, though the word is Japanese), which is sprayed on the plants as a kind of pro-biotic that fights off would-be deleterious bacteria. Bokashi is also used in preparing the *humus*.

Stefano once called me over to a tall group of weeds to show me the big red and black bugs that had colonised the little area. 'This bug works in colonies and they can do much damage, but they also kill other bugs that do damage. We will catch them'. He and another volunteer proceeded to catch the bugs in a jar. The purpose of this was to then grind the bugs, incorporate them into a spray, and spray it over crops that the bugs would-be prey were trying to eat. The essence of the ground up bugs would be detected by the prey who, detecting the false presence of their predator, would abandon the crops. My mind was blown. While I did not witness the spraying and subsequent action of the bugs, I can only imagine that it was done in the first place because it actually works. Stefano says 'Insect has good feel, not like us', meaning that insects perceptual systems are those which we cannot grasp as humans, but work within their insect ecosystems. While *bokashi* or the bug grinding methods are not, strictly speaking, biodynamic methods, Stefano does not practice biodynamics in such a by-the-book way. He rather approaches biodynamics as a baseline (the farm-as-organism) and then incorporates other techniques and methods that he has learned from his life on farms and his studies of ancient and indigenous agricultural ways. He follows the lunar calendar to help him determine when to make particular actions regarding sowing, harvesting and preparing *humus*. He says to me, 'the forces that bring the tide in and out don't work only on the sea, they also work on the land'. Furthermore, he says, almost every large ancient civilisation based their agriculture on the lunar cycle and it goes without saying that you could not have a large civilisation without good agricultural practices. This recalls again Professor Kings book *Farmers of Forty Centuries* and the non-synthetic (read: organic) agricultural practices that sustained up to 500 million people. He often

Figure 24. Freshly harvested zucchini with slight or pronounced bends in their necks, indicating their initial growth up toward the sky. Vergne. June 19, 2018.

refers to Egyptian, Greek and Chinese agriculture and, while he does not utilise the ideas directly, he seems to take them in an amalgamated form that helps him to run the farm in Vergne.

In Stefano's agricultural cosmology the four elements are readily apparent in plants, with the exception of the tomato, which he says is 'very confused'[27]. For example, zucchini are sun plants. Their leaves, and the zucchini themselves, attempt to reach for the sun as they grow (Figure 23). This is

[27] The Greeks identified four elements; In the Hindu tradition there are five, in East Asia there are five, etc.

evidenced by the slight curve at the neck of the zucchini (Figure 24). Stefano tells me that zucchini and other crops from organic farms often get pumped with extra (organic) nitrogen so that they 'grow big big big'. The result is that the fruits become heavy with water and that is why zucchini, for example, do not grow up toward the sun at the outset and often arrive in the supermarket in a straight shape: they are too heavy with water content. This makes me think of watery, superfluous tomatoes or other vegetables that seem to contain water rather than flavour—and the comment Nicolas made about vegetables in Brussels. I am also reminded of Carlo Petrini's assertion that '[a] soil

Figure 25. Have you ever seen such eggplants? The sight of unexpected colours of familiar vegetables can indicate biodiversity, the cultivation of which becomes an act of agricultural resistance against global seed companies. This photo is the 'after' shot of Figure 26. Vergne, Piedmont. September 26, 2018.

that is neither stressed nor polluted will yield products that have superior sensory characteristics' (Petrini, 2007, p. 114).

Stefano's literal and figurative distaste for industrial farming can be well understood through the issue of seeds. I have mentioned above the seed bank in Tucson, Arizona, Native Seeds/SEARCH, an exemplary organisation whose mission is preserving and collecting the large varieties of seeds that have been bred and acclimatised for around 4,000 years. It is curious, that such an organisation dedicated to preserving seeds might be referred to as 'exemplary,' as I have here. The felt need to do so, however, arises from a severe lack of similar organisations and against the backdrop of a monopolised seed market largely controlled by multinational seed companies like Monsanto and Bayern—two companies that recently merged and who are implicated in Shiva's (2017) poison cartel. In coming to the farm, then, I already had some idea about the importance of seeds. As previously mentioned, the wheat Stefano grows here consists of three heirloom varieties. This is also true of the four different kinds of corn he grows, as well as the eggplants, whose colours had me guessing at what kind of vegetable they were since I had only ever seen purple and dark purple eggplants in my whole life (Figure 25). The issue of seeds is one that Stefano discusses with some frequency. I listen in disbelief to the amount of lawful control that seed manufacturers have over what kind of seeds can be planted by farmers and what kind cannot. In some instances there are good reasons for this, especially when it comes to invasive species which can wreak havoc on ecosystems. However, the agricultural laws are tight and are typically set up so that farmers are required to purchase new seeds each year. Beyond the fact that farmers are not necessarily allowed to plant seeds of their own breeding and selection seems odd. More striking is the impact that this has on biodiversity. Stefano gives me the example of the tomato plant, taken from the Americans in the sixteenth century and sailed around the world. He shows me the leaves and says 'tomato is very confused plant, see the leaf'. Its leaves are invariably asymmetrical—a contrast that is noticeable when looking at most other plant leaves and seeing that they are in fact, symmetrical. Stefano tells me, 'The soil in Americas is much deeper, so when tomato come here it is very confused'. Indeed, if you go back to Figures 20 and 22, look closely at the leaves in the photos. You will see that they are jagged, but not uniformly so. Stefano tells me that it takes a tomato plant 'at least seven years' to acclimate to the soil in Europe, after spending hundreds of thousands, even millions of years growing in the soils of the Americas. He proudly points out to me one breed that he grows which is in its sixteenth generation, bred by Ivana's father—it's huge with ripples and thick with fleshy, juicy insides. In modern agriculture, however, this is something that rarely happens because agricultural laws often stipulate that farmers

must purchase new seeds from seed companies each year, preventing the possibility of breeding one's own crop to achieve particular characteristics[28]. The effect, then, is that most crops sold to consumers are no longer *legally* allowed to bred generation after generation in the same soil. In fact, seeds sold with an 'F1' (hybrid seed) do not have the capability of reproducing. What does this mean, then, for biodiversity? It means that each generation of seeds is brand new to the particular

Figure 26. A 'before' shot of the field with eggplants in Figure 25. The dry looking field meets Stefano's high standards. The tilled section on the right produced the soil close-up in Figure 27. The smell of gasoline from the tiller contrasts with the smells of naturalness around it, indicating a limit in the pursuit of sustainability. Vergne, Piedmont. June 16, 2018.

[28] This is not true of individuals growing gardens, obviously, but only for farmers who sell their products to market.

soil and ecosystem of its growth. The removal of seeds from their complex ecological environments, created anew, in isolation from any real-world ecosystem, prevents the seeds from propagating generation after generation in one particular and unique environment; and therefore from being able to grow in correspondence with their environment. This, from an Ingoldian perspective, is tantamount to removing human beings from the natural world—a Cartesian split of seed and soil, plants and their ecosystems. If one takes Stefano at his word about the length of time it takes a 'New World' plant to acclimate to the 'Old World' soil, the implications of current seed laws feel devastating for biodiversity—it is no wonder, then, that modern agriculture is cited as one of the main factors of biodiversity loss (IBPES, 2019). From the cultural standpoint, disabling a farmers ability to select their own seeds wipes out the regional diversity of raw materials—both the ability to create new and to preserve old—and therefore its *terroir*. This epitomises a confluence of issues at the heart of the Slow Food movement and the loss of biodiversity due to industrial agricultural laws and the ensuing practices.

Each time we began to sow a new area of the farm it became clear what kind of soil was 'healthy' soil and what was not. The first time my attention was drawn to this was just after Stefano had tilled a section of dry looking plot of earth in which we were about to plant a variety of chilies and heirloom eggplants (Figure 26). Stefano walked by with a smile on his face and commented ‘very good soil, very healthy, *molto bene’*. I raised my eyebrows because I had not expected him to say that, and walked over to take some soil in my hand. The clay soil was moist under the dry surface and it was crumbly and seemed to stick together like thousands of tiny crumbs. ‘That’, Stefano assured me, ‘is good bacteria in the soil. Work well, eh?’ (Figure 27). Such an experience happened at least a few more times, as well as once when Stefano remarked that the ‘soil here is no good’ as we planted some already sickly tomato plants from the nursery. Several of those plants did not survive their move into the earth. The keys to healthy soil, as I previously mentioned, include crop rotations of things like beans or buckwheat. However, it is not simply about rotating crops, it is about the preparation of the *humus,* the organic compost-turned-soil preparation that gets incorporated into the soil each year and is key to biodynamic farming, organics, and very likely, any regenerative agricultural practices that have taken place in the history of mankind before the twentieth century.

The days were creeping toward the end of July when the lunar calendar indicated that it was time to begin preparing the humus, which would stay undercover all through the winter before being distributed throughout the fields next year. It took four to five people working over four days to prepare

Figure 27. Looking closely you can just make out the little crumbles that comprise the soil. Combined with its moist feeling, an indication of healthy micro-fauna growth. Vergne, Piedmont. June 16, 2018.

*the humus. After clearing out a particular kind of weed that could potentially ruin the whole project if it were to be mixed in, Stefano uses a rented tractor to begin moving the large piles of composting and awful smelling soon-to-be-soil to the area. Some of it is in good shape, but some of it is too wet, says Stefano, which is bad for the process. In order to solve this we must rake out the compost dung and mix several ingredients into it: a biodynamic preparation of herbs and wood chips, ground stone and bokashi (*Figure 28*). The smell is strongly scented of compost and animal dung. At its nastiest, it clumps onto your shoes and is miserable to get off and lingers for hours afterwards. Its sensory features contrast strongly with the sweet smelling flowers or the fresh soil in the garden. Nonetheless, it is a smell that indicates healthy soil that will grow good tasting food—the bad smell of the present that reaches into the future. Such contextualised knowledge creates the potential of making such a smell more bearable, if still unpleasant. This process, this life giving crucible of soil making, is the key to sustaining the land on which the social, cultural (and eventually economic) sustainability of the Ecovillage rests. After the whole pile has been infused with the added components, raked out and lumped into a tight mound, it is covered with dried grass that was cut during the harvesting of wheat. After only three days, Stefano walks us over to the pile, moves aside some of the grass and makes a little hole, telling us to stick our hand inside (*Figure 29*). You can see from the reactions of*

Minae and Christina that they experience an instance of knowing through our senses what anaerobic fermentation means, by way of the heat it gives off—and I am moved to recall the sensuous chemistry of the eighteenth century. In this way we understand how quickly it begins working, and when Stefano tells us it will be kept here in the ground until next season we are induced to imagine what might be happening inside the mound that makes for the kind of soil that brings such high-quality foods.

The sensory contact of such processes is important because it gives a powerful—a Proustian, perhaps—memory or imagination that reins these processes in from abstraction and puts them into contact with our emplaced selves, rendering them real, felt and embodied—and therefore, known. The biodynamic farm, then, is understood as an unfolding place-event in which fundamentally (read: environmentally) sustainable practices are 'learned through the body' (Stoller, 1997, p. 14), through emplaced, multisensory learning experiences of smelling, touching, looking, listening, watching, feeling aches and pains, heat and coolness, tasting rich flavours and hearty textures of raw agricultural materials and enfolded within a global movement that takes the land, the *terroir*, as the starting place for all sustainable practice.

4.3.3. The biodynamic farm: A multisensory education in and with sustainability

My conversation with Michela and Claudio happened only in the first two weeks of our stay on the farm. Listening back, a striking exchange brings out a key piece of this entire project. Our conversation lasted almost two hours and ranged from personal histories to the origins of La Casa Rotta and ideas about what sustainability means— what it takes and how it is learned. As previously mentioned, La Casa Rotta's founding was shaped in many ways through Slow Food and of course, the international Ecovillage movement: with the idea of renewing and revitalising the local community, seeking to develop a space of social and cultural sustainability, necessarily rooted in environmental sustainability (and with movement toward economic sustainability). Michela and Claudio discuss some of the ways that these forms of sustainability amalgamate through food and are inherently educational. They describe workshops they have put on in the past:

> Michela: People bring their own ingredients and supplies. We've had many workshops. Plin, gnocchi, jam, pizza. People were loving it. Many people did not know how to make pasta, they often said afterwards that 'it always seemed to be more difficult than it actually was.' We asked them about

> ingredients: did you know that there is a farm with good eggs near your place? Did you know that we are growing our wheat? So we explain our project through that workshop. And we have done this with kids and adults many times.
>
> Claudio: The perception is that maybe the recipe is easy but that it takes a lot of time. And this way the workshop helps them to understand the value of making food like that. And then of course being in the garden, it is very clear that it is a kind of education.
>
> Michela: One educational thing to do is have people come and ask them to pull weeds: it takes a lot of time! A lot of effort! It's like yoga, meditating. Doing this work everyday is not so nice. There are the insects, the flies and you are tired, it's boring! You are with yourself and you are with the weeds. It is very good proof if you are able to meditate, because it requires a focus and you have to stay with yourself in the end.

In these comments we find two activities: making food together and pulling weeds in the farm. In the first, there is a form of learning that takes place which is emplaced and multisensory: a place-event occurs in which the experience of making a type of food that is familiar, but was previously thought to be difficult. The doing of the making of pasta—a multisensory engagement—brings the attendee closer to knowing its value. Further, the attendees learn ways they themselves can support the environment and the local community by purchasing eggs and flour from local farmers who are good to the land, and therefore good to the local, and through a theory of place, the global.

The second activity of pulling weeds even more directly accords with my own experience. Michela indicates the sensory features of it by describing the long monotonous effort required while flies buzz around you, mosquitos and other bugs bite you. It is through undergoing such an experience that one might learn to focus—or learn they have trouble focusing! And it is this type of experience, the physical, manual labour that is necessary for biodynamic agricultural practice. Through this experience, one can more intimately understand what sustainability means. When it is felt through the sensory immersion, it becomes valuable. Claudio continues speaking about his experiences with volunteers who have come to stay at La Casa Rotta:

> Claudio: When you involve the people in your everyday lives, in doing the projects here, when you involve people in the farm project, you experiment with what sustainability really means, not just *talk* about sustainability. You can feel that you change something in their lives. And they tell you that they change perspective or that they have seen something new that they haven't experienced before, they discover something different. So this is education, actually. This could be renovating the house

> or working in the farm. By doing things they can better remember things. Just talk, in the end, it stops at your brain, it doesn't go inside your cells, it's not in your body.

Here, participation and correspondences in the course of experience in the farm are the ways in which people come to understand what sustainability 'really means'. As an education, this is a participatory, emplaced and multisensory way of learning that changes people in a way that talking cannot. The way that people come to know and learn about the world, to be educated, then, it through 'participatory practice (Ingold, 2018a, p. 17). When understood through a prism of multisensory emplaced learning (Fors et al.) we see that the everyday engagements of looking, tasting, smelling, touching and feeling, and hearing are the constituents of this participatory practice and therefore, the constituents of an education in and with sustainability.

From this, we might think about sustainability education in the formal context of a school that attends primarily to experiences of sight, sound and, to a lesser extent touch. With only these senses engaged, it can be argued that there is a kind of sensory impoverishment in the way that sustainability and sustainable practice is understood by students, and perhaps by teachers or administrators, too. If sustainable practices are not built in to the environments of schools—or schools are not built in to their natural environments—how else is the issue of sustainability inquired after, taught, learned and practiced, and how can teaching, learning and practicing sustainability in schools become more holistically multisensory? If this journey through the history of the senses and work on the biodynamic farm are any indication, the possibilities afforded by a systematic, and explicitly multisensory approach to environmental and sustainability education issues in formal education holds promise for a future that, presently, looks, feels, sounds, tastes, and even smells, bleak.

4.3.4. What about health?

Returning to the earlier discussion regarding Slow Food's approach to health, I too take the soil as the most important point of emphasis in improving the health of people. Even so, I have only recently taken such a position. As mentioned previously, the food on the farm was simple but superb at every turn. There was not much meat served, though we often spent a weekend day venturing to one of the small villages nearby to try local foods, which usually did involve meat. We did not drink much alcohol except on some weekends, but this was also similar to my alcohol consumption in Oulu. When we arrived, already our stomachs were reeling from almost a month of eating heavy meals while traveling through Holland, Belgium, France and Ireland. We were hoping the fresh food of the farm would address our heavy stomachs. So, I was a little disheartened by the realisation of

how late we would be eating each day. I have spent so much effort in attempting to eat early the past few years, but after the first day on the farm I knew that it was not going to be possible. I was a little relieved however, that eating late did not seem to affect my belching issue too much. In fact, despite eating so late I seemed to burp somewhat less than I had in the previous month. But the other issue, the indigestion 'squeeze' which I had been attending to the previous year and on my travels before the farm, was my main concern. After starting on the farm, the fullness of the days soon had me thinking about other things. In fact, one of the first things I noticed about my health is that within a week I was having regular bowel movements. I apologise if this disgusts you, reader, but it is relevant to the visceral experience of research that I undertook.

I had aches and pains from working on the farm, but in visceral terms my body—and Minae's too—was in a state of health I had not experienced since I was quite young. According to Minae, I did not even smell of body odour, despite the fact that I was only showering once a week and working in the hot sun during the day! Minae did not smell either, I should say, but she showered quite a bit more than I did. Minae's thumbnails, which have always grown in with a large divot a the base, had grown in straight over the summer, to both hers and my own astonishment.

I remember arriving back in Oulu and beginning to unpack my bags. Emptying out my backpack of large items, I turned it upside down to remove any hidden trash. A small, white plastic canister hit the floor, and at first I did not recognise it. I picked it up and realised 'Aha!', for it was the fizzy indigestion tablets that I had begun taking the previous winter in Munich: I had completely forgotten about the tablets all summer, neglecting to even think of them. This realisation has been compounded in the following months, as the squeeze returned when I started classes again. It lasted until around November, 2018 until I had used up all the tablets. At this time, I noticed something. When I ate food at school, even though I was eating mostly salad and soup, the squeeze would show up. Or was I fooling myself? I experimented: I stopped eating at school and began taking food with me to eat. The squeeze stopped. Why? I do not know, but it apparently had something to do with the vegetables and/or the soups. Was it because I was only eating raw vegetables and my stomach had difficulty with digestion? I do not know. All I can say is that for the first time in a long time, I ceased to have this worrisome squeeze in my abdomen and that its absences has coincided with active work everyday on a biodynamic farm and eating only at home. I should mention that Michela, who is the coordinator of Slow Food for the Nordic countries, told us about REKO, a local farmer's market group on Facebook from whom we now buy around 80% of our food.

This experience is not to suggest that the food and work on the biodynamic farm were the *cause* of the cessation of my indigestive squeeze, but rather to bring up this experience in this thesis to raise questions that possibly have no certain answers. What was it about eating at school that seemed to bring this squeeze back? I cannot say for sure, but I found out later that the soups at school, usually named simply, 'vegetable medley,' contain about fifteen extra ingredients that I do not use at home, many of which have numbers assigned to them to indicate they are synthetic. It makes me think of the seeds. Are these synthetic additives, produced in isolation and introduced to our bodily ecosystem affecting negatively our visceral experiences, our being-in-the-world? The spread of industrial food processing around the world and the illnesses that come with it are suggestive. I will not investigate the matter here more, but it is one that gives me pause and makes me think. I am intrigued by the visceral—a part of our bodies that is mostly private and sometimes cannot be put into words yet often dictates so many of our actions in the world—and its outwardly connections to the global structures under which we live.

5 CONCLUSIONS, ETHICS, LIMITS

In this sensory ethnographic account I have attempted to draw the reader into the world of La Casa Rotta, the practices of sustainability it pursues, and the emplaced multisensory learning experiences it affords. This thesis project has meant to bridge the senses into formal education by showing the importance they assume in learning. To this end I have included sensuous descriptions of my experiences that are woven with theoretical analysis and supplemented with visual media in the hopes of stirring the reader to empathetically consider this research. Through a theory of place, the experience of reading this thesis—interacting with this ethnographic place—may itself be considered an instance of multisensory emplaced learning. Moreover, global environmental issues like the health of soil and the loss of biodiversity due to intensive agricultural practices are features of the modern world increasingly bind our collective fate. As such, these themes may be generalisable in some ways and I believe findings of this thesis are relevant beyond the Ecovillage of La Casa Rotta. The salience and urgency of the anthropogenic climate crisis require a reconfiguration of the ways environmental education is inquired after and taught. It is my contention that a systematic, and explicitly multisensory approach to sustainability in education holds promise for preparing all learners for the uncertain sensescapes of a rapidly changing planet.

The overall aims of this thesis have been to dissolve theoretically and methodologically the Cartesian edifice that I have recognised as a barrier to sustainability; to suggest the utility of sensory approaches in education that highlight the multisensory nature of learning and being-in-the-world; and to explore these suggestions through sensory ethnographic work on the Slow Food-adjacent biodynamic farm. Through this flexible—even experimental—methodology I have taken an explicitly moral perspective to acknowledge this project's future-oriented positioning in collaborative efforts to create a better world. I have been especially concerned with areas of education and learning related to sustainability and I suggest that sensory approaches to educational research, practice and pedagogy hold enormous potential value for practices of education more generally. In the last chapter I will map the work I have done onto the Big Tent criteria for excellent qualitative research, which identifies eight flexible criteria for reflecting on qualitative research practices (Tracy, 2010). Through this criteria I will address the research tasks, ethics and myriad issues regarding my awareness of the limits of this study, its worth, and the practical and procedural ethics of carrying it out, among other things.

5.1 Big Tent criteria

Sarah Tracy (2010) proposes eight criteria that mark excellence in qualitative research, these include '(a) worthy topic, (b) rich rigour, (c) sincerity, (d) credibility, (e) resonance, (f) significant contribution, (g) ethics, and (h) meaningful coherence (p. 839). Each criterion contains several sub-criteria, many of which are relevant to this thesis project. I will address each criteria, not necessarily in the order listed above, to reflect on this thesis project, understanding the 'ethics' criteria to frame the discussion of all others.

Meaningful coherence: Research tasks

For Tracy (2010) this criterion means that the research has achieved or accomplished what it set out to do, used methods and theories that match their paradigms and are attentive to the connection of literature with the findings, methods or purposes (p. 848). Therefore, I will begin by addressing the research tasks I set for this thesis and the extent to which they have been accomplished.

In the first research task I proposed to 'practically, theoretically and methodologically' dissolve Cartesian ontology. I have drawn from the writing of several authors who propose how this can be done, especially Paul Stoller (1997), Tim Ingold (2000, 2011a) and Sarah Pink (2015). While I have consistently made the reader aware of Cartesianism discursively, the most telling success of this task lies in its embeddedness in the thesis more generally. Therefore, the interweaving of the sensuousness and the theoretical advocated by Stoller (1997) guided my writing especially in the history of the senses, the sensuous auto-biography and in writing Chapter 4, the sensory ethnography. However, I also attempted to adhere to this style in my discussions on Slow Food and when discussing the cultural sensorium. Beyond text, Pink (2015) follows Stoller (1997) to argue that the use of video and images are routes to knowing that can draw readers into the sensory worlds of the research participants. In doing this, the reader may be exposed to similar sensory experiences as the author and research participants, therefore bringing the research into position to evoke all the senses, and thus acknowledge our being-in-the-world. Finally, the theoretical approaches of both Tim Ingold and Sarah Pink are rooted in onto/epistemologies of movement and presence in-the-world. It follows that the proper application of such theories has the effect of dissolving Cartesianism, which I have done through the methodological work of this project. In this way, a symbiosis exists between the theories and writing strategies I have used, each one reinforcing the other in dissolving Cartesianism.

For the second research task I have attempted to enjoin scholarship from the sensory studies fields with education and learning. In sensory studies, education subject of inquiry is relatively neglected,

but historical and modern ways of knowing the world through the senses are well-researched. Therefore, undertaking literary research was vital in making the connections to education and learning. The importance of this task lies in its ability to contextualise sensory scholarship for would-be readers emplacement in a faculty of education, under the assumption that sensory studies may not be familiar.

The third and final task I set was in the theoretical and methodological application of cultural and phenomenological theories and methodologies to the fieldwork. Indeed, the application of my theories and methods to the field work is demonstrated through interweaving the theoretical and the sensuous together. This is apparent and attention has been drawn to the reader all throughout Chapters 3 and 4 regarding the multisensoriality of everyday experience through my life and on the farm.

I have brought together ideas from a wide number of fields and disciplines to and communicated so that they may be read, seen and watched by a wide readership. Overall, I have set reasonable research tasks for a Master's thesis project that were coherent and well connected to the theories and methods I utilised.

Worthy topic

Tracy (2010) defines this first criterion for excellent research as that which is 'relevant, timely, significant, interesting, or evocative' (p. 840). In regard to the research I have presented here there are several reasons why I believe the topic to be worthy. First, the notion of sustainability has become increasingly important over the last two decades as mounting evidence shows significant alterations of the natural environment due to human activity. Recent reports from special UN panels regarding climate change (IPCC, 2018) and biodiversity loss (IPBES, 2019) highlight the urgency of this issue. There are many steps to be taken by many actors regarding these issues and the role of education in addressing these issues is certainly implicated. Education, as opposed to training and controlling, is inherently a slow process that requires time, and as such, I have no pretensions that what I propose in this thesis is in any way a solution that could be immediately implemented or have some immediate effect. Rather, my writing here is geared more toward a future in which breakdowns in environmental services will have drastic effects on global sensescapes. Therefore, see one of the roles of formal education as being able to prepare children for sensory uncertainty, change and resilience. In this way, young people me grow to become flexible and adaptive toward unpredictable (sensory) futures. The sooner that the significance of sensoriality is taken into consideration in education, the better chances we have to build resilience for and with future generations. In this regard I

believe this thesis is also timely and significant. Further, the fact that a sensory approach is missing almost completely from education concerned with sustainability contributes further to addressing an area of sensory studies that is under- and un-represented.

The methodology I have used for this thesis has charged me with presenting the research material in evocative ways. One reason for this is an explicit attempt at dissolving the Cartesian complex that has long held the intellectual world above and beyond reach of many who are supposedly merely in the world (e.g. the ivory tower). The evocative ways in which I have (re)presented this thesis and the world in which it is based make the content interesting, and importantly, have the possibility of being accessible to those outside the world of academia. This, I believe, is a consequence of considering myself not separated from my non-academic peers, but rather bound up with them in inextricable ways as beings-in-the-world. Such a consideration demands ways of communicating that are accessible to as wide of a range of people as possible. Through the attempt to be sensually evocative, I hope this thesis draws the reader into the world of my research and moves them to become concerned with making the world a better place in new and important ways.

Rich Rigour

The richness of qualitative research can be adduced to the presence of a variety of 'theoretical constructs, data sources, contexts, and samples' (Tracy, 2010, p. 841). In bringing the interdisciplinary field of sensory studies to bear on education it was necessary to consider a wide variety of theoretical constructs. Before, during and after the fieldwork I worked to ensure that my experiences could be set against the theoretical constructs proposed by the theorists I have used. This was a process that has lasted even to the present moment and ideally will continue into the future as I begin to pursue a PhD course, following similar theories and methods I have used here.

The biggest shortcoming for the current project is that the ethnographic fieldwork lasted only for eight weeks. The strength of ethnographic methodologies comes particularly from their long-term engagements in the field that might constitute up to a year and more. This being the case, the scope I set for this project was not focused solely on the ethnographic fieldwork but also included literary research and discursive strategies in order to show the potential of the senses and sensory ethnography for education. Although I was forced to leave out a number of themes I found in my fieldwork material—for example, the potential of non-linguistic sensory perspectives in intercultural communication—I am hopeful that I may find use for them in the future.

A further shortcoming under this criterion is related to the shifts in my research focus that occurred in the field. The ideas I developed about my research before going into the field certainly coloured many of my early interactions, particularly in interviews. As a consequence I ended up not even using data from two of the interviews—though the experiences of doing those interviews were formative in the directions that I ended up taking the research toward, overall. This situation is surely not unique among ethnographers, but in this case I was affected negatively as a consequence of the relatively short time I spent on the farm. For example, looking through my field notes, I found a 'thought' I had written down that sounded almost exactly like the third research task I outlined for this thesis. The date of this field note was July 21, which is just a couple of weeks before I left the field. Longer time in the field would have allowed me to pursue these ideas in more depth while actually in the field. Instead, there were a few aspects of my field work that I would regard as 'shortcomings', including not being able to ask questions that gave space for multisensoriality. For example, when I entered the field I was quite sure that food and eating were going to be the main foci of my inquiry. However, as time went on I realised how bound up all the sensory categories are with one another and realised I needed to expand my approach. The consequence of all this was that many of my earlier questions and inquiries focused too much on food and eating at the expense of more holistic understandings of multisensory emplaced learning in the farm.

I do feel, however, that I used a varied selection of examples and contexts to represent my fieldwork material. Additionally, my attendance at the Slow Food conferences and follow up visits to the farm, though they were seldom or not at all mentioned in the thesis, certainly played significant roles in the shaping the thinking (and doing) that produced the work presented here. Also, as I mentioned in the methodology section, the number of photographs and videos that Minae and I have collectively accumulated numbered over 2,000, and my full-field note write-ups came to near to 20,000 words. This material made it abundantly possible for me to *imagine* myself back into the field as I engaged in my analysis. In this regard, Minae was indispensable as co-researcher not only because of the different perspectives she created and produced through media but also because of her ability to draw my attention to important moments in the field (e.g. Stefano, and then she, tasting the baking soda water), as well as the many discussions she has engaged me in regarding this work. Moreover, her presence in the field has helped lead to richer collaborative opportunities with La Casa Rotta (i.e. the *miso* workshop) that she conducted in February, 2019. Therefore, I feel that Minae as an accomplice in the field significantly increased the richness and rigour of the fieldwork in the relatively short

time we stayed. Additionally, the tasks set for this project also helped to account for the limited time in the field so that this project could be in part supplemented through literary research. All things considered, if I am lucky enough to parlay this project into PhD research I believe this research builds a solid foundation from which to continue further doctoral research.

Sincerity

The sincerity of the research hinges on two main concepts of self-reflexivity and transparency, with Tracy (2010) defining it as something that is 'achieved through self-reflexivity, vulnerability, honesty, transparency, and data auditing' (p. 841). As the reader is aware by now, I have tried to be clear about the importance of researcher reflexivity from the very start of this thesis and indeed, sensory ethnography demands a level of reflexivity and honesty that I believe fulfils this criterion quite well. For example, through the writing process and in accord with sensory ethnographic methods, I felt compelled to produce the auto-biographical section of this thesis as a way of laying open my own subjectivities and biases that have led me to take on this work. Moreover, I take this 'Big Tent' criteria as an additional way of engaging with sincerity in qualitative research. While I have addressed some of these issues in section 3.2, I feel there are some finer details that were not conducive to the flow of that section and so have decided to discuss them here, in this final chapter.

It is important to speak a little more on my relationship with the members of La Casa Rotta and how it has developed. I have spoken already about how I attained permission to do research with this group but there are some finer details that were not mentioned earlier. For example, my initial outreach to La Casa Rotta was primarily with the intention of fulfilling my internship requirement for the University of Oulu in a way that would allow my wife to join me. The WWOOF program was one ideal possibility and I began to inquire. The first time I considered doing research with La Casa Rotta was upon hearing back from Michela who, in her initial reply, informed me that she worked at Slow Food and was responsible for dealing with the Nordic countries. A fruitful dialog then opened between us and within a couple of weeks I had begun to consider the possibility to do research at the farm. I had simultaneously been exploring Pink's *Doing Sensory Ethnography* and this situation was quite serendipitous, to say the least! I owe my attendance at both Slow Food conferences to Michela who informed me about both events and encouraged me to apply as a research delegate to the event in Turin. The experiences at the Slow Food events have greatly impacted my understandings of the theories I have used, in part because Sarah Pink (e.g. 2007, 2008a, 2008b, 2008c) has also carried out research with Slow Food and her research experiences have informed her development of senso-

ry ethnography. Briefly, I would also like to fully disclose my own relationship with Slow Food. As I previously mentioned, I have been familiar with Slow Food for quite some time. However, only recently have Minae and I both become official, fee-paying members of Slow Food in Finland, and have been for the second year running. In fact, we became members just over one year ago before attending the Slow Food conference in Copenhagen, which was held for two days in April 2018 and was self-funded. The conference in Turin was held in September 2018 over five days and was partially funded, in kind, by Slow Food. In the former I was invited by Michela. In the latter, I applied as an academic researcher and was granted the status of 'Delegate of Finland'. Slow Food organised a homestay with a local family, provided transportation to and from the airport and the homestay family's house, entrance to the conference and lunch and dinner in the delegate's canteen. I do not believe, however, that our affiliation with Slow Food in any way compromises the quality of the materials I have collected or the connections I have made regarding theory, methodology and field work. Indeed, if anything, my involvement with Slow Food has brought me to a better understanding of their stances and philosophies and has greatly aided in bringing this thesis to fruition.

I have mentioned that I took two follow up visits to La Casa Rotta, one visit happened immediately after the Slow Food event in Turin, in September 2018. The second visit was in the winter, in February 2019, and was part of a short holiday to Italy that I took with Minae. The reasons to return to La Casa Rotta were based on the fact that Minae and Michele had planned and organised a workshop on how to make *miso* from scratch. The *miso* workshop was conducted with twelve local Piedmont residents and made using all local Italian-produced products (except for the *koji* bacteria which was brought from Japan). It was a collaboratively designed event that fall in line with what Pink (2015) calls the 'future orientation' (p. 49) of sensory ethnography that is meant to be collaborative and co-productive in designing liveable or sustainable futures. In this case, our summer at La Casa Rotta opened the door to future collaborations with the Ecovillage and from the applied perspective of sensory ethnography. In all, the process of working with La Casa Rotta in the production of this thesis was met with very few practical or methodological challenges and I feel our relationship has been productive.

Finally, I bring up the issue of language here. Even though the research took place in Italy, much of my interaction with members of La Casa Rotta and other international volunteers took place in English. Before arriving in Italy I had never studied Italian, though it was certainly helpful that I previously studied Spanish for several years and am a native English speaker. Minae and I both attempted

to immerse ourselves in speaking Italian as much as possible, but admittedly, my own efforts were negatively affected by my attention to writing and recording field materals. That said, in some respects the reciprocal inability to communicate in either Italian or English (particularly with Christina and Ivana), actually brought two benefits: first, it required us to learn some amount of Italian for communicating, and second, it brought the sensoriality of communication to the fore of our interactions. Indeed, our relationship with Christina and Ivana, we felt, became particularly close precisely because of the ways in which we communicated through a mix of misunderstood words, gestures, tonality, laughter, photographs, videos, food and myriad social contexts. Considering that sensoriality was central to my focus, this relationship brought a really unique dimension to the research and could even have the potential for research specifically concerned with sensory ways of communicating interculturally. I did not, unfortunately, find the space to treat this more deeply.

The interviews I conducted were all done in English with participants who were fluent speakers of English. The one exception to this was Claudio, who does speak English but we agreed that he would answer questions in Italian so that he could better articulate his thoughts. I asked a question in English, he answered in Italian, and Michela translated this as he spoke. While there is a clear disadvantage in this, I feel that it was somewhat ameliorated by the fact that Claudio's long term partner, Michela, was the person translating. In regard to Stefano, our primary interlocutor, his instruction was always in English though he often commented that his English was 'poor', and there was much he could not explain the way he wanted to. That said, he spoke with us quite a lot in English about his philosophies and theories regarding agriculture and, just as with Christina and Ivana, his lack of high level fluency meant that sensory ways of interacting with Stefano happened often. One of the largest gaps in my fieldwork, however, was not being able to sit down with Stefano and Ivana to have an extended interview with them, as I had intended. This was also the case with Micol and Christina, the two volunteers doing a biodynamic apprenticeship with Stefano. Even though Stefano and Micol could communicate fairly well in English, I wanted all of them to be able to answer questions in Italian—with Michela or Michele to translate, as they are both highly fluent English speakers—so that the quality of their articulations was at its highest. Unfortunately, this proved very difficult to coordinate before we had to leave the farm. Fortunately, this situation was somewhat ameliorated by the sheer amount of time we were able to spend working with Stefano, Ivana, Micol and Christina. If there are future opportunities for research with La Casa Rotta, I hope to be able to enrol in Italian language courses to eventually be able to linguistically communicate better with La Casa Rotta members.

Credibility

The criterion for credibility is fairly extensive and touches on thick description, triangulation (or crystallisation), and multivocality and partiality' (Tracy, 2010, p. 843). It is perhaps telling that many of the sub-criteria here are built into sensory ethnographic practice already. The term 'thick description,' for example, has long been the modus operandi for anthropologists ever since Clifford Geertz (1973) opened his seminal (and now thoroughly critiqued) classic book of essays, *The Interpretation of Cultures,* with a chapter of the same name to expatiate this approach. With this in mind, I felt it was permissible at times to use fairly lengthy, direct quotes in some sections of this thesis, particularly in Chapter 2 with the history of the senses and some theoretical constructs. It was my hope in such cases that by doing so, I would be able to add a level of richness to the contexts of the larger points I was trying to make, especially considering that I have drawn from so many different fields and disciplines outside of education and learning. Certainly, utilising the voices of established scholars directly provides a certain kind of authority and explication that my own voice may not have been able to bring. This, moreover, is linked with the my own challenges in grasping the theories well enough to present them and use them. Overall, however, I think I have shown through my own voice that I do indeed have a good handle on the sources I have used.

Tracy (2010) also indicates that acknowledging the 'tacit' (p. 843) dimension of fieldwork is one way of building on thick description, and indeed, the 'tacit' ways of being in the world are central to sensory ethnography. This is one example that highlights the dynamic approach sensory ethnography takes to ensure rich, high quality research practice. Crystallisation and/or triangulation are also important for credibility and this requires the author to show how multiple theoretical positions 'converge on the same conclusion' (Tracy, 2010, p. 843). The fact that Ingold, Pink, Slow Food and members of La Casa Rotta fall into complementary positions in relation to understandings of sustainability and education has been an intriguing discovery to make, and I feel the alignment of their positions indicates future possibilities of inquiry.

Multivocality is sub-criterion under credibility and it falls very much in line with the collaborative and productive relationship that Minae and I have developed with La Casa Rotta, as I have described above. Multivocality also emphasises 'showing' rather than simply 'telling' and sensory ethnography is well equipped to do this in regard to its emphasis on photography, audio, video and similar methods (p. 844). One final sub-criterion in regard to credibility is 'member reflections', which al-

lows an opportunity for the research participants to provide their own thoughts on the research. While I have not engaged with this per se, it is my intention to begin by sharing copies of my thesis with La Casa Rotta, a material artefact that they have co-produced. Indeed, I once witnessed a gentleman stop by Vergne to drop off his newly completed thesis for Stefano, thanking him for the opportunity to do research together with a hard copy of the thesis and a bottle of liquor from the man's home region. In fact, it was in the references pages of this thesis, all written in Italian, that I discovered the classic organic agriculture book, *Farmers of Forty Centuries*. I should have guessed that Stefano was no stranger to mentoring researchers. I intend initially to have the abstract translated into Italian, followed by the entire text, if possible. In this way, every member of La Casa Rotta would have equal access to it. Further, it is my hope to continue working with La Casa Rotta in the future in closer collaboration with ways that are productive for all of us.

Resonance

Tracy (2010) defines resonance as a 'researcher's ability to meaningfully…affect an audience' and to 'promote empathy, identification, and reverberation of the research by readers who have no direct experience with the topic discussed' (p. 844). As one of the main purposes of sensory ethnography is to invite an audience into the sensory worlds of the research participants, it is uniquely well-placed to have resonance with its audience. I have attempted to do this through the sensuous and theoretical mixture of prose, evocative descriptions and depictions of the sensory worlds I inhabited with the research participants, as well as using devices like *italics* to textually indicate shifts in tone and temporality. I believe representing my research this way gives it a high degree of what Tracy (2010) calls 'Aesthetic merit', or, presenting in a 'beautiful, provocative, and artistic way (p. 845). However, since completed theses at the University of Oulu are now electronic, it was my original intention to include the video clips into the text itself and I took the necessary steps in order to insert rich media into the final pdf/a document. I was informed by the library, however, that only photos are allowed to be included in the text, not videos, and it was recommended that I set up an external site for the videos, as I have done. Considering the fact that theses are now electronic and the seeming eagerness of the university to become technologically competent, I found this to be quite unfortunate. I hope future consideration is given to making video a possibility in thesis submissions.

The resonance criteria also discusses transferability across contexts. I have briefly touched on this above, seeing the themes of sustainability, education, soil health and sensory emplaced learning as highly transferable across contexts, considering that climate change and biodiversity loss operate

widely on a global scale, while research in education and learning may yield new ways of understanding these processes when taken through a lens of sensory emplaced learning. The bridging of sustainability and sensory emplaced learning, I feel, has enormous potential for future studies in education and learning, intercultural studies and beyond.

Significant contribution

This criterion considers the theoretical, heuristic, practical and methodological significance of the research (Tracy, 2010, p. 846). In the foreground to this thesis I identified the small amount of sensory research that has been undertaken in education and learning studies and noted that education research that takes a sensory approach to sustainability is essentially non-existent. In this way, and in accordance with the findings of this thesis, I feel that I have been able to make a significant contribution at the particular level—Master's thesis—at which I am writing. I do feel that I have touched on the beginnings of a project that has potential to make a significant contributions in wider spheres of research in the future. For the time being, however, it is my hope that I have been able to shine light on some previously unconsidered relationships between learning and education, the senses and sustainability.

5.2 Moving forward

I have touched on several ethical considerations of this research in the preceding sections of this chapter, including especially through my discussions regarding sincerity and credibility. I have also mentioned at several junctures in this thesis that doing sensory ethnography itself implicates the researcher in a moral framework that is collaborative, future-oriented and seeks to change the world for good. Some examples of the collaborative and productive outcomes that have been borne through my research activities with La Casa Rotta include organising the *miso* workshop together. In some regard, the fact that we have collaborated in such a way is suggestive of the ethicality of my actions as a researcher with the participants in my research at La Casa Rotta. I have taken care not to place any undue burden on my participants or bring harm upon any of them during the field work and I am committed to this in the future.

In my agreement with Michela, a founder and acting director of La Casa Rotta, I earlier indicated that the use of personal names and the names of organisations associated with La Casa Rotta (i.e. Slow Food) was an agreement that was made prior to the start of the fieldwork. It has been my own

choice to use only the first names of participants and not to include the names or faces of children in any content associated with this thesis. The reasons for this have to do with my own relationship to the participants, and I have used the names of people in the this thesis the same way I used them while in the field.

I have alluded to the idea that this research places me in a good position from which to commence further sensory ethnographic research toward a PhD. Regardless of what the near future holds for my career, however, working on this project has deeply impacted the way I think, feel, act and sense my way through the world, and my hope is that any readers of this work may be moved to consider the fundamental significance of the senses and the inextricability of our being-in-the-world.

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